BOSTON MEDICAL
AUG 5 1962
LIBRARY

Digitized by the Internet Archive
in 2012 with funding from
Open Knowledge Commons and the National Endowment for the Humanities

http://archive.org/details/richmondlouisvil28loui

GAILLARD'S

MEDICAL JOURNAL.

(*Formerly the Richmond and Louisville Medical Journal.*)

E. S. GAILLARD, M.D.,

EDITOR AND PROPRIETOR.

BOSTON MEDICAL LIBRARY ASSOCIATION.

VOLUME XXVIII.

NEW YORK:

A. G. SHERWOOD & CO., PRINTERS, 76 EAST NINTH STREET.

1880.

CONTRIBUTORS TO VOLUME XXVIII.

	PAGE
T. CLIFFORD ALLBUTT	59
J. H. ANDERSON	303
J. H. ATKINSON	258
ROBERT BARNES	537
N. BOZEMAN	14
S. M. BRADLEY	35
WALTER COLES	101
W. H. DAY	51
GASPAR GRISWOLD	30
REGINALD HARRISON	549
WILLIAM A. HAMMOND	389
ROBERT HAMILTON	237
C. B. HUTCHINGS	395
A. JACOBI	141
S. B. JOHNSON	293
F. MASON	545
C. H. MASTIN	393
W. H. MAYFIELD	250
EDWARD MILLER	131
J. L. MILTON	489
CH. NULL	269
B. H. PALMER	323
F. PASCHAL	113, 514
M. A. PALLEN	425, 550
R. P. PENROSE	152
J. J. PICKLES	56
H. POWER	308
H. R. RAYMOND	234
WM. RUTHERFORD	519
P. V. SCHENCK	404
A. A. SMITH	129
J. P. THOMAS	198
B. A. WATSON	1
J. F. WEST	548
C. WILLIAMS	243

CONTENTS OF VOLUME XXVIII.

	PAGE
Abscess of Liver by Aspiration, Treatment of.	113
Abscess of Liver by Drainage, Treatment of..	339
Aconite, Dr. G. H. Mackenzie on	77
Alexis St. Martin	479
Aloes as a Dressing	191
Aloin, Hypodermic Injection of	322
Ammonia, Intra-venous Injection of	237
" in Dyspnœa, Carbonate of	596
Amputations of the Hip, Control of Hæmorrhage during	547
Amputation of the Hip by Jordan's Method..	548
Amputations, Treatment after	335
Anæsthetics, Dr. Rabuteau on	228
" New Experiments on	86
" in Ovariotomy	76
Anal Fissure, Importance and Treatment of..	138
Antiseptics, Experiments on	463
Antiseptic Osteotomy for Genu Valgum	44
" Surgery	46
Arthritis, Trousseau's Cataplasm in	276
Articular Rheumatism, Chronic	141
" " Propylamin in Acute .	45
Arsenic in French Chalk	461
Barker, Dr. Fordyce. Presentation of Bust by	477
Baumgarten on True Tubercular Giant Cells.	96
Blistering, Neglect and Value of	189
Blood Coloring Matter free from Iron	366
Bulkley, Dr. L. Duncan, Dermatology	477
Calculus Præputial	192
Carbolic Acid as a Remedy for Bee Stings	379
" " Poisoning	287
" " Safety Tablets	366
Cardiac Diseases associated with Bright's Kidney, Organic	345
Castor Oil, Palatable	272
Celloidin as a Substitute for Gun Cotton	77
Celluloid, Manufacture of	80
Cerebral Hyperæmia, Podophyllin in	578
Cervix Uteri, Sims' Rules for Operating on Epithelioma of	470
Cheek, Scars and Fistulæ of	532
Chemical Clock, A	367
Chloride of Lime as an Insecticide	272
Children, Diseases of	406
Cholera, A True Neurosis	234
" Infantum	247
Chronic Contusion of the Heel	195
Cinchona, Historical Notes on	387
Clavicle, Treatment of Fracture of	175
Cockroach Poison	330
Cod Liver Oil, Substitute for	287
Constituents of Cereals	374
Contracted Kidney	49
Cotoin in Diarrhœa	387
Cystitis, Lactic Acid in	597
" through Contagion by use of Unclean Instruments	131

PAGE

CORRESPONDENCE, ORIGINAL.
Dr. Charcot to Dr. Hammond, "Use of Illustrations." 581
Dr. Gaillard to Journal, "White Sulphur Springs." 169, 263
Dr. Gillette to Journal, "American Medical Association." 583
Dr. Hammond to Dr. Charcot, "Use of Illustrations." 579
Dr. Heiburg to Dr. Hammond, "Army Sanitary Purveyor." 583
Dr. Meyer to Editor, "Puerpueral Convulsions." 171
Dr. Purdone to Editor, "Bromine as an Antidote to Rhus Poisoning." 75
Dr. Tauzky to Editor, "New York Academy of Medicine." 439

Dangerous Victory 472
Death by Drowning, Signs of 385
Dentistry in New Zealand 472
Detecting Forgeries 181
Diarrhœa in Children, Therapeutics of 116
Digitalis, Remarks on 101
Diphtheria and Religion 291
" from Fowl to Man, Communication of 195
Direct Incision of Knee for Loose Cartilages 545
Disinfectants and Deodorants 279
Disinfectant, A New 271
Drugs, on Secretion of Bile, Action of 519
Drug Smoking, Therapeutic Value of 50
Drunkenness from Coma, Differentiation of 134
Duboisin, A New Mydriatic 375
Dyspepsia 334

Eczema, Oleate of Zinc in 99
" Treatment of 243
Epilepsy, Treatment of 336
Enterotomy 476
Epithelioma of the Penis 280
Examinations, Competitive 426
Excision of Hard Chancres 94
Excitability, Morbid Reflex 359
Exopthalmic Goitre in Child followed by Chorea 141
Explosives, Composition of 271
Eucaloptus Globulus, Volatile Oil of 80

EDITORIALS.
Advantageous Offer 608
Advertisers 607
Back to Busy Life Again 482
Close of Volume Twenty-Eight 604
Delay 487
Facts of Interest 487
Gratifying 487
Guarranteeing Advertisements 607
Hard Times 487
Horlick's Food 196
Important Facts 487
Improvement 608
Kentucky School of Medicine 388
Local Notice 487
Microscope in Medicine 388
Monument in the Field of American Literature 608
Removal to New York 387
Report of State Board of Health 294
Surgeon General Wales 606
Title of the Journal 485
Typical Case of the World's Injustice 485
Warner's Pills 196
Yellow Fever 195

Fatty Change (and Failure) of Intestinal Muscular Wall 248

PAGE

Fatty Embolism of Lungs following Fracture. 280
Fellow's Syr. Hypophosp. Co 480
Filth Diseases 471
First Labors, are they more dangerous than others 133
Fœtal Heart Beat in Relation to Sex 404
Foreign Bodies in the Ear, Treatment of 94
Found, A Critic 190
Fractures and Fatty Emboli 539
Fragrant Plants, Cultivation of 271
Fucus Vesiculosus 473
Functional Intestinal Obstruction 87
Fusel Oil from Spirits, To Remove 370

Galen and the Circulation 382
Ganglion, A Mysterious 595
Gastrotomy 468
Ginger and its Soluble Essence 462
Glycerine as an Anti-Ferment 366
" in Hæmorrhoids 471
" to prevent Sourness of Milk 583
Gonorrhœal Pus, Micrococci in 290
Grape Juice, Fermentation of 272
Gun Shot Wound, Remarkable Recovery from 372
Gun Shot Wound of the Uterus 407
Gynæcology, Clinical Lectures on 428, 550

Hæmorrhoids Treatment 327
Hereditary Tendency to Disease 599
Heroic Treatment 424
Homœopathy Simplified 365
Horse Pox, Experiments with 186
Hypochondria, Use of Opium in the Treatment of 389

Immersion Treatment of Ulcers 244
Insect Powder 177
Insecticide, Tomato Juice as an 475
Intermittent Fevers, Classification of 244
Intestinal Obstruction in a Child 51
" " Treatment of 35
" " " " by puncture of small Intestine 418
Intra-Uterine, Medication Instrument for 467
Iodine in Intermittent Fever 87
Ischiatic Artery, Ligation of 378

Jaborandi in Mumps 194
Jaques, Dr., New Spectroscope 184
Jaws, Fracture of Upper and Lower 383
Junod's Boot Application 187

Killed by Wild Beasts and Snakes 461
Koumiss, Artificial 461
" Imitation 89

Lactopeptine 89
Lead Colic 96
Leprosy in British Guiana 475
Linseed Meal Poultice, Substitute for 366
Liquid Food, Hints on 367

McDowell Monument 594
Medical Societies and the Medical Profession. 353
Medical News 96, 191, 289, 386. 477, 599
Medicated Pessary 197
Mental Diseases and Heart Lesions 96
Milk of Sulphur in Diphtheria 576
Miracle, A North Carolina 79
Muscle Beating 478
Mushroom Poisoning 323

Neurasthenia and Womb Disease 399
" Jewell on 597
Nipples and Mammal Supernumerary 415

Opium for Smoking 78

PAGE

Opium Smoking, Experiments in..... 100
Ornaments with Motion produced Electrically 593
Ovarian Tumors, Diagnosis of large 465
Ovariotomy with Consecutive Pregnnacy.... 88
" Two Double and two Single Operations..... 14

Paracentesis Pericardii 380
Patella, Fracture of..... 597
Patent Compressed Effervescent..... 480
Pessary in Prolapsus Uteri..... 293
Petroleum..... 269
Physicians of New York on Lunacy Reform.. 595
Pelvic Cellulitis..... 513
Phthisis, Treatment of Night Sweats in..... 542
" Source of Hæmorrhage in..... 284
" Mensuration of the Chest in..... 283
Pharmacopœial Remedies..... 592
Pilocarpine an Oxytoxic..... 416
Plague in Russia..... 90
Placenta Prævia, State of Uterus in..... 537
Pocket Records..... 515
Podophyllin, Dangers of the use of..... 378
Popliteal Aneurism, Treatment of..... 333
Potato Bugs Utilized..... 479
Progress in Physiology, Recent..... 308
Prostatic Enlargement, Treatment of..... 549

Quarantine..... 191

Railway in Palestine..... 479
Rancid Lard 80
Resection of Wrist Joint..... 250
Retention and Incontinence of Urine in Children..... 242
Retroflexion of the Uterus, Treatment of..... 288
Reunion, A Brilliant..... 481
Rhus Poisoning, A Remedy for..... 468

REVIEWS.
Acton—Reproductive Organs..... 448
Agnew—Lacerations of the Female Perineum..... 454
American Health Primers..... 444
Atkinson—Obstetric Procedure..... 83
Attfield—Chemistry 81
Black—Functional Diseases of Genito-Urinary System..... 450
Bozeman—Ovarotomy..... 460
Bristowe—Diseases of Peritoneum..... 273
Bumstead—On Venereal Diseases..... 584
Cohen—Throat and Nasal Cavity..... 274
Coles—Dental Mechanism..... 458
Durkee—Gonorrhœa and Syphilis..... 448
Ellis—Anatomy..... 83
Frerichs—Diseases of the Liver..... 82
Fulton—Physiology..... 369
Handy—Dissections..... 458
Harris—Medical Terminology..... 455
Harris—Dentistry..... 456
Hartshorne—Conspectus..... 588
Hewetts—Diseases of Women..... 453
Hillier—Diseases of Children..... 457
Hoffman—Analysis of Urine..... 369
Hufeland—Art of Prolonging Life..... 450
Hunter—Dental Caries..... 457
Leber—Pathology of the Teeth..... 456
Lershmann—System of Midwifery..... 444
Lewin—Sub-Cutaneous Sublimatic Injections..... 450
Lizars—Use and Abuso of Tobacco 457
Meadows—Midwifery..... 454
Miller—Alcohol its Place and Power..... 452
Ranney—Surgical Diagnosis..... 84
Richet—Cerebral Convolutions..... 371

PAGE

Rosenthal—Nervous Diseases..... 275
Ryan—Philosophy of Marriage..... 449
Seiler—Diseases of Throat and Nose..... 274
Shaffer—Pott's Disease..... 84
Stephen Smith—Operative Surgery..... 371
Sewell—Dental Anatomy..... 458
Stockton—Dental Materia Medica..... 458
Taft—Operative Dentistry..... 458
Tawner—Index of Diseases..... 452
Tomes—Dental Surgery..... 458
Troussean—Clinical Medicine 452
Turnbull—Anæsthesia..... 368
Walker—Intermarriage..... 449
Wedd—Pathology of the Teeth 456
Wilson—Dental Association..... 176
Wilson—Naval Hygiene..... 180
Wurtz—Chemistry..... 181
Wyeth—Surgical Anatomy..... 84
Wythe's Microscopist's Manual..... 453

Salicylate of Soda in Rheumatism..... 175
Scalp, Loss of Whole..... 381
Salt Common, as a Remedy for Poisoning..... 386
Sewers..... 603
Scientific Education..... 468
Shakespeare and the Circulation of the Blood. 95
Shop Women, Ill Health of..... 602
Sims, Dr. J. M., Tribute to Dr. Atlee..... 599
" " " New Edition of Work by.... 481
Singular Growth from Pectoral Muscle..... 393
Skull, Compound Fracture of..... 1
" Incised Wound of..... 281
" Punctured Fracture of Base of..... 253
Sleep, Causation of 389
Sleep Walking, To Cure..... 480
Smoking, Effects of on Teeth..... 185
Spleen, Congenital Absence of..... 468
Sphygmophone, The..... 479
Squills, Poetic Dose of..... 79
Sterility, Causation of 495
Strangulated Femoral Hernia in Man 540
" " " Posture in Treatment of..... 136
Surgeon General Hammond..... 473
Sweating Hands, Treatment of..... 98
Syphilitic Virus, The Nature of..... 490

SOCIETIES, PROCEEDINGS OF.
American Dermatological Association.... 560
" Gynæcological " ... 152
" Medical " ... 62
Grayson Co., Texas, Medical Society..... 353
Medico-Chirurgical Faculty of Maryland. 285
Virginia Medical Society..... 435

Tea, Toxic Effects of..... 591
Tenting, On..... 43
Tetanus, Anatomy of..... 383
Tobacco, Poisoning by External Use of..... 48
Tomato Juice as an Insecticide..... 171
Toothache, A Pleasant Remedy for..... 469
Torticollis, Paludal..... 42

Urethra, Spasmodic Stricture of..... 466
Uterus, Chronic Inversion of..... 471

Varicose Ulcers, Treatment of by Solid Rub-Bandage..... 258
Variola, Treatment of by Hyposulphites..... 290

Yellow Fever..... 303
" " Poison, Nature of..... 86

Zoedone..... 481

BOSTON MEDICAL LIBRARY ASSOCIATION

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XXVIII.] JULY, 1879. [No. 1.

ORIGINAL COMMUNICATIONS.

"Qui Docet Discit."

ART. I. *A Contribution to the Treatment of Compound Fractures of the Skull.* By B. A. WATSON, M. D., Surgeon to Jersey City Charity and St. Francis's Hospitals, Jersey City, N. J.

Having examined our case and found a compound fracture of the skull, the first question presented is how shall the bone be treated? The management of the bone necessarily depends on the extent and character of the injury. However, as my views on this subject are in complete accord with those recently expressed by one of England's most distinguished surgeons,* I shall not go over this ground, but enter immediately on the consideration of the treatment of the injuries of the soft parts. In the performance of this work the surgeon ought to be actuated by a desire to accomplish a cure as quickly as possible, and with the minimum of danger. What are the pathological changes and the dangers which commonly occur in these cases? These questions now become very important, and should be carefully investigated, in order that the means employed may accomplish the objects sought. It has long been supposed that traumatic inflammation constituted the principal danger, while the part played by septic infection has been almost completely disregarded, both in theory and treatment. It will be observed hereafter, however, that the most popular element in the treatment of these

*Erichsen, Science and Art of Surgery, 1878.

cases, which has been almost universally recommended and from the antiphlogistic standpoint, is nevertheless one of the very best antiseptic agents which can be employed. The metamorphoses which take place in the parts affected by traumatic inflammation are not limited to any particular tissue, but extend more or less to all the tissues within the limits of the injury. Billroth says: "An incision is now made from above downward into the tissue, the capillaries bleed; the bleeding soon stops, the wound is accurately united, no matter by what means. Now, what are the principal changes that take place here? The blood coagulates in the capillaries to about as far as the next branching—to the next point of intersection of the capillary network. Some coagulated blood almost always remains between the edges of the wound (fig. 2). Of the channels for the circulation in our diagram, a few have become blocked up; the blood has to accommodate itself to this, and escape by the existing by-paths around the wound. It is obvious that it does this under greater arterial pressure than before. This pressure becomes greater the greater the obstruction to the circulation, and the less numerous the by-paths (of the so-called collateral circulation). The result of this increased pressure is the distension of the vessels, hence the redness in the neighborhood of the wound and partly, also, the swelling. This latter symptom has, however, another cause. The more the walls of the capillaries are distended the thinner they become; even under ordinary conditions of pressure, with normal thickness of their walls, they allow blood plasma to pass through to nourish the tissues, and now under increased pressure more plasma than usual will pass through the walls, saturating the injured tissue, and becoming absorbed by the latter by reason of its capacity for swelling. You have in a few words the explanation of the changes sometimes externally perceptible in the borders of the wounds immediately after the injury; the redness and increased warmth due to the rapid development of the collateral circulation by reason of which a greater volume of blood circulates through the vessels near the surface; the swelling of the borders of the wound is caused by the distension of the

vessels and the swelling of the tissues, which again produce slight compression of the nerves, and thereby some amount of pain."* Other factors may certainly to some degree enter into the development of inflammation arising from wounds, but these are the more important elements in pure uncomplicated traumatic inflammation. The pathological condition already mentioned as occurring in traumatic inflammation will be found to differ widely in degree, depending somewhat on the character of the tissue injured, and largely on the nature and severity of the injury itself. In contused wounds there will be found frequently ruptures of the vessels, extravasation interfering with the nutrition of the parts, and a laceration of the integument, which readily permits the contact of the atmosphere with the albuminous subtances. Again, the same injury frequently separates the scalp from the skull over a larger or smaller portion of its surface, thus making pockets for the accumulation of blood, pus, &c. The diseased condition here designated as traumatic inflammation follows very promptly the receipt of the injury, and septic infection may and sometimes does follow it, even before there has been formed a single drop of pus, the complication arising from putrefactive changes in the albuminoid substances, to which we shall have occasion to refer hereafter. It must now be admitted that that which was formerly called traumatic inflammation was in many cases a septic process, and here the complication was much more troublesome and dangerous to the patient than the original inflammation. Various forms of this low and diffuse inflammation, all of which are more or less allied, are recognized by different names—such as septicæmia, pyæmia, erysipelas, phlebitis, cellulitis, osteo-myelitis, spreading traumatic gangrene, &c. Any attempt to enter into the details here of the etiology and pathology of these morbid conditions would require too much time and space, although a certain degree of information on these important points is essential to the study of their treatment. It is generally admitted that these diseases depend on the absorption

† Surgical Pathology and Therapeutics, vol. i., p. 69, *et seq.* Translated from eigth edition, New Sydenham Society, 1877.

of the septic material that originates in the putrefaction of animal matter. The conditions of putrefaction are the presence of albuminous matters, the existence in or the access of living germs, a moderately elevated temperature, and a certain amount of moisture. The putrefactive process is accomplished by the presence and multiplication of a microscopic organism called bacterium termo. We have now briefly glanced at traumatic inflammation and the septic diseases that arise as a complication of compound fractures of the skull. Let us now examine the past and present methods of treatment that we may know how far they seem to meet the indications. Hippocrates says: "In a wound of the head, you must not apply any thing liquid, not even wine, but as little as possible, nor a cataplasm, nor conduct the treatment with tents, nor apply a bandage to an ulcer on the head, unless it be situated on the forehead, in the part which is bare of hairs, or about the eyebrow and eye, for wounds occurring there require cataplasms and bandages more than upon any other part of the head." * * * "A wound in any other part of the head must not be treated with tents, bandages, or cataplasms, unless it also requires incision. You must perform incision on wounds situated on the head and forehead whenever the bone is denuded of flesh, and appears to have sustained some injury from the blow, but the wound has not sufficient length and breadth for the inspection of the bone, so that it may be seen whether it has received any mischief from the blow, and of what nature the injury is, and to what extent the flesh has been contused, and whether the bone has sustained any injury, or whether it be uninjured by the blow, and has suffered no mischief; and with regard to the treatment, what the wound, and the flesh, and the injury of the bone stand in need of. Ulcers of this description stand in need of incision; and if the bone be denuded of the flesh and if it be hollow, and extend far obliquely, we cut up the cavity wherever the medicine can not penetrate readily, whatever medicine it may be; and wounds which are more inclined to be circular and hollow, and for the most part others of the like shape, are cut up by making a double incision in the cir-

cle lengthways, according to the figure of the man, so as to make the wound of a long form." * * * "When in any wound of the head, whether the man has been trepanned or not, but the bone has been laid bare, a red and erysipelatous swelling supervenes in the face, and in both eyes, or in either of them; and if the swelling be painful to the touch, and if fever and rigor come on, and if the wound looks well, whether as regards the flesh or the bone, and if the parts surrounding the wound be well, except the swelling in the face, and if the swelling be not connected with any error in the regimen, you must purge the bowels in such a case with a medicine which will evacuate bile; and when thus purged the fever goes off, the swelling subsides, and the patient gets well. In giving the medicine you must pay attention to the strength of the patient."* Garengeot says: "This I have seen in a man, who, being struck with a last by a shoemaker, was carried to the Hotel-Dieu, the 8th of October, 1713. Mr. Mery found a small wound, in appearance, upon the middle part of the right parietal; but it appeared by the probe that there was a considerable fracture. That surgeon made a crucial incision; having laid bare all the wounded part, he took off a splinter, which was only the first table of the bone. The next day he took off two other splinters; and the dura mater all black and gangrened came out with them. Mr. Mery put upon the brain a sindon dipped in warm spirits of wine, and over it small dozels dipped in the same liquor, some plagets covered with a digestive, &c."† A. Tavernier recommended the following, in order to prevent the development of inflammation, viz: "To effect this highly important object, recourse may be had to the method of Schmucker, which consists in the immediate abstraction of blood, an operation which should be repeated, if the circumstances of the case require it, twice or three times during the first twenty-four hours. Thick linen compresses should then be applied to the parts, having first dipped them in a cold mixture, composed

*Works of Hippocrates, vol. i., pp. 457–464. Trans. by Adams. The Sydenham Society, 1849.

†Treatise on Chirurgical Operations, by M. Garengeot, 1723, p. 394.

of the following ingredients: ℞. Water, lb. x.; vinegar, lbj.; nitrate of potash, ʒiij.; hydro-chlorate of ammonia, ʒiv. These compresses should be renewed every hour, taking care at the same time to administer some aperient drink, in combination with the nitrate of potash, some laxative medicines, such as the neutral salts and stimulating injections. Schmucker recommends this treatment not only in wounds attended with simple fracture of the cranium and symptoms of severe injury of the brain, but in all cases of wounds of the head. In those cases which require the application of the trephine, he prescribes precisely the same means, with the exception of blood-letting, until the patient has perfectly recovered. Without employing this method in its full extent, we should never neglect the use of blood-letting, either general or local, at the same time that we prescribe the use of laxatives, a solution of tartarized antimony, purgative injections, and sudorific medicines. These means constitute the basis of the general treatment of wounds of the head, and are calculated to prevent or remove the congestions and inflammations of the brain, which are generally the most dangerous and unpleasant consequences of these kinds of wounds."* Professor Chelius says: "In every injury of the head, the patient is therefore to be closely watched, the antiphlogistic treatment, and especially the cold fomentations to be long persisted in, and the proper relief of the bowels attended to."† Professor Longmore says: "In all other cases it seems now generally admitted that much harm will be avoided, and benefit more probably effected, by employing long-continued constitutional treatment, viz., all the means necessary for controlling and preventing the diffusion of inflammation over the surface of the brain and its membranes, the most careful regimen, very spare diet, strict rest, calomel and antimonials, occasional purgatives, cold application locally, so applied as to exclude the air from the wound, and free depletion by venesection, in case of inflammatory symptoms arising."‡ Professor William

---

*Elements of Operative Surgery. By A. Tavernier. Trans. by S. D. Gross, M. D., 1829; p. 162.

†System of Surgery. Trans. by South, vol. i., p. 444, 1847.

‡Gunshot Wounds, p. 74, 1862.

Fergusson says: "If there be a wound in the integument, it must be treated as one would be in another part; it may be stitched, strapped or poulticed, according to circumstances. Whether there is an opening or not, it is an almost invariable custom to apply cold; but should suppuration threaten externally, I should often prefer a poultice, under the impression that this process would counteract any suspected excess of vascular action within. Undoubtedly, according to established custom, I should always apply cold at first in these cases; but I should certainly place most of my faith in other measures, more likely in my opinion, to avert or subdue deep-seated inflammation."* Professor Abraham Colles says: "The constitutional treatment of such injuries should consist in the most sedulous employment of the means calculated to prevent inflammation and suppuration of the brain and its membranes."† Dr. John Hannen speaks of cold applications as being always soothing to the patient, recommends the formula used by Schmucker, and says: "To avail ourselves of the full frigorific effects of this mixture, it should be prepared in small quantities, and used immediately before its temperature (which is greatly depressed by the act of solution) has risen to that of the surrounding atmosphere. Snow or pounded ice, or ice water, applied to the parts in a half-filled bladder, or cloths simply dipped in cold water, will often answer every purpose."‡ Professor S. D. Gross says: "The treatment of these various lesions must be strictly antiphlogistic, blood being taken freely by leeches, or even by the lancet, if the patient is at all plethoric, and the dangers from cerebral involvement imminent; the bowels are thoroughly moved by drastic cathartics; the heart's action is controlled by the antimonial and saline mixture, with the addition of a suitable quantity of tincture of veratrum viride; and the head, shaved and elevated, is kept constantly covered with pounded ice, or some refrigerant lotion. If the case is obsti-

*System of Practical Surgery, 1843.

†Lectures on Theory and Practice of Surgery. Ed. by McCay, p. 95, 1845.

‡Principles of Military Surgery, p. 228.

nate mercury is employed in doses from two to three grains thrice a day, with a view to rapid and decided ptyalism."* I have cited these authorities for the purpose in part of showing the views of the profession in regard to the supposed dangers arising from these injuries, which is well portrayed by the treatment even in those cases where they have failed to mention expressly its purpose. The number of authorities here referred to is not large, being in fact only a very small part of those I have examined on this subject; but I may safely assert that they fairly represented the professional opinion until a comparatively recent date. Again, it is only natural to suppose that these authorities have some value, since any method of treatment which has been so generally adopted by the profession must possess some meritorious element which secures for it a certain degree of success. The treatment recommended by Hippocrates, it will be seen, differs in a marked manner from that followed by his successors, although it is questionable if theirs show that degree of improvement which might naturally be expected from the lapse of time and their opportunities for progress. The most important feature of Hippocrates's treatment was the free incision and the consequent drainage. The treatment recommended by the other authorities is commonly called antiphlogistic, and for the purpose of study may be conveniently divided into constitutional and local. The constitutional treatment consists in the use of the lancet, blood-letting, cathartics—saline and mercurial—sedatives, antimony and veratrum viride, conjoined with low diet and strict rest. The local treatment may be summed up as follows: Shaving and elevating the head, applying ice or other refrigerants to it, and the application of leeches; or, in certain conditions, poultices to the injured parts. Professor Fergusson expressed a self-evident truth in these words: "If there be a wound of the integument it must be treated as one would be in another part." This principle supplies a safe basis for action in wounds of the integument, since the same dangers here threaten the life of the patient as in wounds of other parts,

*System of Surgery. Fourth Edition, vol. ii., p. 160.

and the same object is sought to be accomplished by the surgeon. Our study of this question has already forced us to the conclusion that pure uncomplicated traumatic inflammation is not dangerous to life unless complicated with putrefaction and its frequent attendant, septic infection. How are we to prevent septic infection? The general answer is by the same means used in the treatment of wounds in other parts of the body, i. e., by a strict adherence to the antiseptic principles; but owing to certain structural and other peculiarities as well as difficulty in the practical application of these principles, a special description appears to be required. The choice of the particular form of antiseptic treatment must always depend on the advantages and disadvantages in special cases. It should be remembered that any form of treatment is antiseptic which will prevent putrefaction of the albuminous substances. That most generally employed at this time was introduced and largely perfected by Professor Jos. Lister, of London. Its use, however, soon extended to Germany, where it is now largely employed and highly extolled by the German surgeons. The remarks of Professor Billroth on the antiseptic treatment of wounds are worthy of consideration. He says: "Perhaps in the future the water-bath, the ice treatment and poultices, will fall more and more into the background in presence of the open treatment of wounds, from which I have seen very good results in contused wounds, as well as in incised wounds with cavities, and in presence of the Lister method of treating wounds, about which all those are enthusiastic who have had frequent opportunities of employing it for contused wounds." * * * * * "That a wound treated from the first by the open method has no bad smell, unless larger shreds become gangrenous in it, I have stated already." * * * * "The longer I carry out the open treatment of wounds, the more satisfied I am with it; you will yourselves have opportunities for convincing yourselves of this in my clinique. No method of treatment of wounds furnishes an absolute guarantee against incidental wound diseases; each method must be studied. Thus in the open treatment of wounds, superficial adhesions of individual

wound-pockets may take place, in which decompositions of secretion develop themselves; we must know how to recognize such conditions early, and to obviate them. Many surgeons now strongly advocate the method of occlusion of wounds by thoroughly disinfected dressings and early introduction of drainage tubes to carry off the wound secretions, and by the application of antiseptic dressing materials, after the methodical instruction of Lister. It is asserted that by this method an equally mild course is obtained, as in subcutaneous contused wounds; that the dead shreds of tissue do not become decomposed, but shrink up without stench and are thrown off with very little suppuration; that the clots of blood either become organized directly, or pass out of the wound in the form of inodorous, gray fragments; that acute septic, or progressive suppurative inflammation, never occurs with it, and that the severe incidental wound diseases, of which we shall speak later on, never become developed with it. I can not do otherwise than recommend strongly to you the employment of this method."* The results obtained by Lister's method are certainly admirable. I have recently had an opportunity of watching its action in a considerable number of cases, and can therefore from observations confirm the statements made by Professor Billroth. I regard it as the most perfect antiseptic method with which we are familiar; but its application to the treatment of compound fractures of the skull is attended with this difficulty that, during the use of the spray, the respiratory passages must be protected against the action of the acid; this protection may be accomplished in a variety of ways; and, since it requires only a slight degree of ingenuity on the part of the operating surgeon, it need not be described. The rapid growth of the hair also gives some trouble. The use of Lister's method must commence with shaving the scalp as closely as possible, after which it must be thoroughly cleansed; the wound disinfected, drainage tubes introduced in such a manner as to prevent an accumulation of blood or other albu-

*Surg. Pathology and Therapeutcis. Trans. from Eighth Ed., vol. i., pp. 229–230–231, New Sydenham Society, 1877.

minous substances, either in the wound or beneath any portion of the scalp which may have been separated from the skull by the accident. The proper introduction of these tubes may require the making of counter openings for their entrance or exit, or for both. The tubes are to be cut short, but must be retained in the wound in such a manner as to continuously serve the purpose for which they were introduced. Owing to the elastic nature of the tubes or the swelling of the parts, it has been found difficult frequently to accomplish this satisfactorily. The opening through which the tube formerly protruded may become closed, and then the surgeon is compelled to make a painful search in the wound for the end of the tube which has thus disappeared. To prevent this mishap it has been recommended to transfix the open mouths of the tubes by very fine needles. This recommendation is a good one, and should be followed in all cases. Another point in connection with the use of elastic drainage tubes I deem of sufficient importance to mention, i. e., they are liable to be so compressed by the parts as to become occluded, and for this reason fail to perform satisfactory work. The remedy for this may be obtained by either diminishing the pressure or substituting tubes which will not be affected by it. It has not been thought necessary to enter into the full details of Lister's method of dressing wounds, since a detailed description may be found in many of our surgical text-books and journals. The importance of closely shaving and thoroughly cleansing the scalp, and the careful introduction, retention and permeability of the tubes, must be readily apparent to those familiar with this system of wound-dressing, and, also, in fact, in any other antiseptic process of treatment as well. The same precautions are required when the application of ice-bags are made with the intention of preventing septic infection. It may be asked if it is possible to prevent septic infection by the use of ice? I am satisfied that it is both possible and practicable. I have recently used it in two cases of compound fracture of the skull, with entire satisfaction to myself, and its use was followed by the recovery of the patients. I am fully convinced that cold is one of the best

antiseptic agents that can be employed in the treatment of scalp wounds with or without fracture of the skull. However, it can not be depended on in deep wounds of other parts of the body; it will protect, antiseptically, to the depth of the scalp, provided there is good drainage; but it must not be forgotten that it should be applied as soon as possible after the receipt of the injury, and kept continuously applied until the wound is protected against septic infection, by the formation of healthy granulations. These granulations form very slowly; the healing of the wound is greatly retarded by the ice treatment; but there is certainly much to be said in its favor, i. e., its safety. In the cases of compound fracture already referred to, the ice was continuously applied in one case four weeks, and in the other nearly three weeks; in neither case were the wounds completely healed when the ice treatment was discontinued, although the wounds were covered with granulations, and closed very promptly afterward. The question may be asked whether it is better to apply the ice-bags directly to the scalp, or should there be an intervening layer of cloth or gauze? I prefer a single layer of gauze, but this is not a point of much importance. The object of this treatment is to prevent putrefaction, and therefore the surgeon should examine the wound with special reference to this point, and for this purpose the sense of smell should be intelligently employed. Let it be remembered that to make this treatment successful the ice-bags should be applied after the receipt of the injury, before the commencement of putrefaction, should be kept continuously in place, thus making it necessary to have two bags; and as soon as the ice has so far melted in the bag on the head as to make its removal necessary, another should instantly take its place. It will be observed that what I aim at is cleanliness and cold, for the purpose of preventing septic infection; now some may prefer to accomplish the same by the use of cold and moistened pieces of linen cloth, and for this purpose several pieces of convenient size are kept on a piece of melting ice, which is placed near the patient for the convenience of the attendant, who is required to place one over the injured parts at very short in-

tervals—every one or two minutes. The pieces may be single or double layers. The modified antiseptic treatment recommended and practiced by G. W. Callender, F. R. S., is certainly entitled to some consideration in the general management of wounds, on account of its simplicity; but in cases of compound fracture of the skull I should not assign to it a higher than third rank. The open treatment of Hippocrates is not likely to be regarded at the present time with much favor, although it is certainly entitled to the merit of enabling a surgeon to examine the skull pretty carefully, and at the same time it supplies fair drainage and a moderate degree of antisepsis. The local treatment in these injuries should conform to the rules for the management of wounds in other parts of the body. Surgeons should no longer blindly follow the long-honored antiphlogistic rules, but accept so much of the ancient practice as is really antiseptic and consequently meritorious, unless we have something better to offer as a substitute.

The general treatment required in conjunction with the local antiseptic management in these injuries will be found to be greatly changed. Blood-letting for the purpose of producing its antiphlogistic action may be now truly regarded as a lost art. The use of mercury for the purpose of producing ptyalism will be no longer required. Sedatives and depressants may be likewise banished. The patient, immediately after the dressing of the wound, will be benefited by a dose of a mixture containing bromide of potash, hydrate of chlorate, and fluid extract of ergot. It is unquestionably advantageous to secure for the patient rest in bed with the head elevated. These or similar remedies should be used several days, for the purpose of producing the required sleep and quiescent state. The fluid extract of ergot should be omitted when there is any nausea or vomiting. The administration of a cathartic within the first twenty-four hours after the receipt of the injury is nearly always highly important. The selection of the particular drug may be properly left to the attending surgeon. The physiological action of cathartics need not be fully discussed here, although I wish to say that the ad-

vantages derived in these injuries from the use of well selected cathartic agents are: first, the removal of undigested and indigestible substances from the alimentary canal, lowering of the blood pressure, equalizing the circulation, removal of the hyperæmia of the visceral organs, and the resulting consequence, improved functional action of these organs. The quantity of food should be sufficient to satisfy the appetite, but it should be carefully selected with reference to its digestibility. In certain cases the administration of tonics may be required, as their use undoubtedly hastens the patient's recovery; but these are by no means generally necessary. It need not be mentioned to surgeons, who are accustomed to follow Lister's method of treatment in their hospital wards, that the patients they treated, after a few days, even in cases of amputation of the limbs and in other severe injuries, are characterized by the following conditions: Entire, or almost entire, absence of those symptoms which indicate the existence of fever, appetite unimpaired, taking food with as much relish as prior to the receipt of the injury, and conversing cheerfully with those about them. The highest temperature seen at any time after these severe injuries or operations which are treated strictly in accordance with Lister's method is commonly on the second or third day, and, although the temperature on these days may reach 103° F., still there is complete absence of thirst, appetite even here unimpaired, and the patient remains cheerful. From this period the temperature rapidly declines, until it becomes normal, where it remains.

ART. II. *Two Cases of Double and Two of Single Ovariotomy, Successfully Performed by* DR. NATHAN BOZEMAN, Attending Surgeon New York Hospital, etc. Reported by DR. RUDOLPH TAUSZKY, Gynæcologist Mt. Sinai Hospital, Outdoor Department, New York.

That the operation of ovariotomy is to-day acknowledged to be a legitimate one, is well known to every practicing physician. As a matter of historical value, however, it may per-

haps be of some interest, even at this late date, to note while reporting several additional successfully performed operations for the removal of ovarian tumors and their after treatment, to refer briefly to some high authorities abroad, who have opposed ovariotomy in the strongest language, and have tried to discredit the statements of its originator, and the bold operators who were the first to perform it in this country. For instance: Professor Joseph Hirtl, of Vienna, one of the most eminent anatomists living, made the following derogotary, and, at the same time remarkable, statement regarding the dangers of, and the want of faith he had in the accounts published about ovariotomy in his celebrated work, "Handbuch & Topographischen Anatomy und Ihre Practisch Medizenisch-Chirurjischen Anwendungen, Wien, 1865."

The Doctor says: "The sad history of this operation teaches every sensible person whether a degenerated ovary should be extirpated as advocated twenty years since by Blundell, and in the case recently operated upon by Atlee, who extirpated both ovaries, one of which weighed three-fourths of a pound, the other one pound and a quarter! Every year new cases are being published, and are adduced as proof of the justification of this. *Jus impune occidendi chirurgorum!* Ovariotomy is even claimed as a justifiable operation on the strength of statistics. Thus Phillips has collected sixty-one cases, more than one-half of whom are stated as having recovered after the operation. In which cemetery these cured patients have found their last resting places, in consequence of the procedure instituted for their cure, we are not told. A simple discharge from the hospital is no insurance against a speedy death, which was doubtless hastened by the operation. Palliative measures, relieving symptoms as they arise, would be far safer for the patient than the operative procedure, the consequences of which can by no means be foreseen. He condemns Erichson's hardihood, who makes an exploratory incision in supposed cases of ovarian tumors for finding out adhesions with neighboring organs, or to ascertain their mobility. He cuts the belly of the woman open to introduce his fingers and hand; and explores the tumor, and

then consoles himself with the opinion that perhaps no injury will be done to the patient (see *Journal of the Medical Association*, January, 1854). How far may the hardihood of men extend, who, for the purpose of a simple exploration, cut their patient's belly open! If in a case without parallel which Eve relates (a collection of remarkable cases, page 491), a woman lived thirty-two years after having had ovariotomy performed upon her person, he might be considered just as trustworthy and reliable as the statement of the operator to the effect that, five days after the operation, his patient was seen to make up her own bed! The protruding intestines were exposed to the air only twenty-five minutes. A mere trifle for the North American Æsculapius, who found it necessary to extirpate the ovary only fourteen times! 'I am no longer a surgeon,' Hirtl concludes his condemnatory sarcasm regarding ovariotomy, 'I therefore claim the privilege of speaking.'" * * *

Statements like the above were uttered but a decade or two ago by surgeons of the highest standing in the profession, showing conclusively the truth of the old proverb, *Errare humanum est.*

Dr. Jas. Johnson held a similar view, though forty years before (see *London Medico-Chirurgical Review*, vol. ii., 1825), he expresses his disbelief in the statements of Dr. McDowell, who, as is well known, performed the first ovariotomy upon the person of Mrs. Crawford, at Danville, Kentucky, in December, 1809, and Dr. J. severely criticises Dr. McDowell's report of his first three cases to the late John Bell, in these contemptuous words: "*Credat Judaeus, non ego.*"

To-day we have the authentic reports of Spencer, Wells, Koeberlé, Schroeder, Keith, Billroth, and of hundreds of others abroad; and of Peaslee, Atlee, Minor, Storer, Nathan, Smith, Dunlap, Van Buren, S. D. Gross, Miller, T. G. Thomas and a host of others in our own country, who show by their successes that hundreds, nay thousands, of lives have been saved by the judicious and skillful performance of ovariotomy. Few of the most eminent ovariotomists, however, both here and abroad, can pride themselves upon having so perfected this formidable operation; and what is of par-

amount importance for a successful result, the after treatment —as our townsman, Dr. Nathan Bozeman, who, regardless of and in spite of serious complications, and operating under the greatest difficulties in one desperate case, and in another one of an old, broken-down lady, sixty-five years old, that was very unpromising indeed—has saved their lives by ovariotomy, and has restored them to perfect health. The notes of the latter case, with those of the two double ovariotomies performed this year at the Woman's Hospital in this city—all successfully—are of sufficient interest I think, together with the details of the all important after treatment, differing widely from that practiced by most other ovariotomists of note, to be published in extenso, especially since his methods of operating are in some points original.

Let us consider briefly Dr. Bozeman's method of operating, and compare it with the points insisted upon by that celebrated ovariotomist, who has justly acquired a world wide reputation for his skill as a diagnostician and successful operator in ovarian tumors, Spencer Wells. This surgeon advocates (and practices) that the pedicle be severed a good ways from the ligature, and fixed externally. He makes the incision not larger than necessary, and insists upon pure air, cleanliness and rest as essential requisites for success.

Dr. Bozeman attributes his success, even in the most unpromising cases, to the following points mainly: (1) The antiseptic (Lister's) method, which he used in the three cases herewith reported. (2) He transfixes the pedicle and ties it right and left, with waxed, carbolized strong silk ligatures, returning it into the peritoneal cavity without exception; and the Doctor claims that there is hardly ever any necessity for using any clamp whatever for securing the pedicle extra peritoneum. He practices like Spencer Wells, that the abdominal sutures, when closing the wound, be passed through the peritoneum at the same time, in contradistinction to Koeberelé, of Strasburg, who does not include the peritoneum. He also employs for this purpose carbolized silk sutures, which he thinks preferable to silver wire. Furthermore, he judiciously feeds his patients from the first by the mouth or the rectum,

according to indications, with beef tea, eggs, milk, &c., and he also uses quinine and opium from the first as an antipyretic, and a preventive of peritonitis. The hydropathic measures—Kibbies's cot—he advocates if in spite of this after treatment the temperature of the patient becomes elevated above the normal. Dr. Bozeman insists that the nature of the tumor and its pedicular attachments should always be ascertained first before proceeding further with the operation. His first incision for this purpose is never larger than is sufficient for the introduction into the peritoneal cavity of his abdominal spatule as he terms it (a flexible, metal rod, ten to twelve inches long, having at both ends a triangular shape, like a vaginal Nott's depresser, with the angles well rounded off, about one inch long). With this instrument he explores the extent of the adhesions, if there be any, and the size of the tumor. Where the diagnosis of an ovarian tumor is certain the first incision is made large enough (four to six inches) to introduce the hand, and to separate the adhesions, if these be present. The next step consists in tapping the cyst or cysts with Spencer Wells's trocar, the patient being turned on her side, and the cysts are thus emptied to a size sufficient to pass his right hand through the abdominal opening into the peritoneal cavity while drawing out the cyst with his left. This simultaneous use of both hands is of the utmost importance, in Dr. Bozeman's opinion, while drawing out the cyst. The right hand thus introduced inside the cavity completes the separation of adhesions that may have remained after the use of his spatula, and this also guards against any undue stretching or possible rupture of the intestines or gall bladder with which there may be adhesions. From the failure of the observance of this precautionary measure, doubtless many ovariotomies proved fatal that might have resulted otherwise, had the precaution herein referred to been zealously observed. Quinia sulphate, six to eight grains every six hours, and twenty-five drops of liquor opii comp., administered per rectum, are the doses of these remedies administered from the first, for the purpose above alluded to. Dr. B. dislikes hypodermic injections after ovariotomy, since these are abhorred by some

patients on account of their painfulness, and thus cause some nervous excitement, which should be avoided if possible. He considers, as stated, the clamp, as first introduced by Hutchinson in 1858, as entirely unnecessary; so, also, the serre-nœud of Koeberlé, as used by that surgeon even to-day.

To further illustrate the great value of Lister's method of antiseptic treatment, which has but recently been employed by ovariotomists, it may not be out of place in this connection to quote Schroeder's view and experience regarding the same, and the plan pursued by Koeberlé. Dr. S., of Berlin, reports in the Berlin *Klin. Wochenschrift*, 10th of March, 1878, on the results of fifty ovariotomies, which he terms Listerian, performed in Berlin between May 25, 1876, and February 24, 1878 (particulars in each case given). Of fifty women, forty recovered. According to Schroeder infection is the exclusive cause of death after ovariotomy. With absolute certainty, it may be stated the results will be good in proportion as intection can be prevented. New sponges, instruments freshly cleaned by instrument-makers, and then placed in a solution of carbolic acid. The room should be sprayed half an hour before the operation with a five per cent. solution of carbolic acid. We may do what we will with the peritoneum—cut it, burn it, tear it in pieces, crush it, tear it off, and yet never is the classical picture of general peritonitis produced. This experience of Schroeder's is amply verified by the three cases lately operated upon by Dr. Bozeman, at the Womans's Hospital, where a separate pavilion has been erected for this operation.

Koeberlé recently taps large ovarian tumors five to ten days before the operation, but does not use the carbolic acid spray, the superiority over the ten per cent. solution of sulphite of soda which he generally uses for the purpose, he, however, admits in hospitals. Dr. K. has never left one ovariotomy incompleted, in three hundred operations. But strange to say, he considers the use of ligatures cut short and dropped as not absolutely free from danger, since they may give rise to purulent collections and various accidents. He prefers carbolized cat-gut. He still treats the pedicle by the extra peritoneal

method, encircling it with a wire like an ecraseur; above the wire he places a silk ligature, left until the fifth and eighth day. Dr. K. thinks this preferable to the clamp, since his serre-nœud (as he calls it) is the better adapted for the purpose.

Drainage through Douglas's cul-de-sac he considers dangerous; he prefers a glass tube reaching down the cul-de-sac, and draws off the effusion with a syringe in case of suppurative peritonitis or profuse hæmorrhage. Clean linen napkins are used instead of sponges for peritoneal cavity-cleansing. He had only ten deaths in eighty-four ovariotomies. In uniting the abdominal wound he prefers not to include the peritoneum in the sutures, and contends its importance is exaggerated by Spencer Wells. As will be seen by Koeberlé's remarks, recently published in the *Obstetrical Journal* of Great Britain and Ireland, there is yet some difference between the most eminent ovariotomists mentioned regarding the use of the clamp, Spencer Wells, the serre-nœud, by Koeberlé, and the waxed, carbolized strong and transfixed double ligature and the dropping of the pedicle by Bozeman, who discards as entirely unnecessary the other two cumbersome instruments. In Bozeman's first case, performed in 1865, published September 1, 1866, in the New York *Medical Record*, under the title "Remarks on the History of Ovariotomy," and the report of a case in which the inter-peritoneal treatment of the pedicle with the silver ligature, was adopted with success, he used the silver ligature; in the three recent cases herein referred to in detail, he used waxed carbolized silk.

In Austria, up to 1866, only twelve ovariotomies had been performed, eleven of which proved fatal, according to Peaslee. See his work on "Ovarian Tumors." One died from hæmorrhage, and ten from peritonitis. In 1874 I witnessed Professor Billroth's thirty-third ovariotomy, and he told me that of this number sixteen recovered and seventeen died. He then had no faith in the antiseptic treatment of wounds. His first assistant, Dr. Gussenbauer, who is now professor in Liége, Belgium, when asked by me what he thought of Lister's

method of treating wounds, answered: "It substitutes one stench for another!" To-day, four years later, Billroth himself attests to the great value of the antiseptic treatment of wounds, and he has better success in his operations to-day since its employment. Out of seventy-six ovariotomies performed by him from 1865 to 1876, forty-five recovered; thirty-one died. By far a better result than he had up to the time I saw him operate. In the table published by Olshausen, in his recent work, "Die Krankpeiten der Ovarien," 1877, a complete list of statistics is given of all the published operations for ovarian tumors, and we find German surgeons are not as successful as a rule as the English and American surgeons. Still Olshausen, of Hall, who from 1865 till July, 1877, performed fifty-eight ovariotomies, with thirty-eight recoveries, reports that of eighteen cases where the antisep tic method was strictly carried out, seventeen recovered. See "Olshausen Ovariotomie, Statistik, page 226. He further states: "A glance at the results of ovariotomy in different countries gives us the sad information that we are yet far behind England and America in our successes." Dutoit's grand statistics gives the following up to 1864: England, 379 operations, 230 recoveries=60 per cent.; United States of America, 117 operations, 68 recoveries=58 per cent.; France, 26 operations, 12 recoveries=46.15 per cent.; Germany, 55 operations, 15 recoveries=27.27.

Olshausen ascribes the bad results in Germany to the following: (1) That they selected only the worst cases for operating. (2) The more important cause of the many ill successes is to be accounted for by the fact that most cases were operated upon in large hospitals, with excellent chances for septic poisoning, without yet the knowledge of how to obviate this difficulty. With our present mode of antiseptic surgery we might operate with success in the largest and worst hospitals, and fear no septic infection; and lastly (3) on account of our want of skill in properly diagnosticating the cases, and our want of technical ability in our operators, few of whom could show a larger sum of operations! Grenser's statistical table shows out of 129 complicated operations, 62 recoveries

=48 per cent. Virchow and Hirsch, Jahresbericht, 1867 to 1873 inclusive, still furnishes for the Germans a saddening result. In Germany, 174 operations, 87 recoveries=50 per cent.; in France and Belgium, 136 operations, 83 recoveries =60 per cent.; England and America (U. S.), 611 operations, 462 recoveries=75.6 per cent.; Scandinavian countries, 95 operations, 74 recoveries=78 per cent. Finally, we may add Dr. Bozeman four operations, four recoveries= one hundred per cent. recoveries.

From day to day the statistics of ovariotomy show a more favorable result than ever before, owing in part to the use of disinfectants, the greater skill of the operators and the publication of each point conducing to make the operation a favorable one. Believing that there are many points worthy of especial note in Dr. Bozeman's operations, we herewith append the histories of his cases, copied from the case-book of the New York Woman's Hospital, kindly furnished by the house surgeon of that institution. The fourth case, published as already referred to above in the New York *Medical Record*, is herein simply alluded to as one of the most complicated on account of its adhesions that is ever likely to be met with; and still, by the patience, perseverance and undoubted skill of the doctor, this also was entirely cured, and stands as a triumph of American gynæcological surgery.

Case I.—S. C., aged thirty-three years; native of Ireland; married seventeen years; widow thirteen years; had one child sixteen years of age. Admitted into New York Woman's Hospital May 6, 1878, on account of abdominal tumor, which she noticed nine months before admission. Tumor at first manifested itself on her right ride, when it was of the size of a child's head. Patient felt some tenderness and sometimes pain over abdomen before she noticed the tumor; she lost some flesh, but her appetite always continued good. Menstruated first at fifteen; amount scanty, lasting four to five days without pain, and regular every four weeks. Last menstruation lasted from May 1 last to the 5th. Complains of pain over pubes, and occasionally during the past year has had frequent micturition. No discomfort while

standing or walking. Bowels move two to three times every day. Much pain in the back. Physical examination reveals the presence of an ovarian tumor. Measurements: Circumference, 34½ inches. Right anterior superior spinous process to umbilicus 7½; left anterior superior spinous process 8 inches; pubes to umbilicus 7 inches; ensiform to umbilicus 7 inches. There was also present intense vaginitis. Abdominal tumor adherent; larger on the right side; very tender and prominent to the left of the umbilicus and below it. Some veins on right side enlarged. Slight œdema over the abdomen. Umbilicus protuberant. Percussion elicits tympanitic sound on right side when lying down. Over the left side it is dull when patient is sitting up. Tympanitic over left lumbar region; slightly dull over right. From this Dr. Bozeman considers that the tumor comes from the right ovary, as the tumor is larger on the right side. Uterus strongly anteflexed; cervix to the right; os externum patulous. Sound or probe can not be introduced. Dr. B. judges uterus to be two and one-half inches deep. Rectal examination negative. Facies ovariana very marked.

May 9.—Patient was seen by Drs. T. G. Thomas and Thos. Addis Emmet; both consider the tumor to be ovarian. Dr. Thomas states that she has had peritonitis, and that the abdominal walls are adherent; also, that vaginitis is not uncommon. One finger in the vagina and hand outside over abdomen gives fluctuation; aortic pulsation felt through tumor. By the irregular, nodular outline of the tumor, Dr. Bozeman thinks it multilocular.

May 13, 2 P. M.—Bowels and bladder having been thoroughly emptied and the patient having been etherized, an incision was made in the median line, about one and one-half inches above pubes, to one inch below umbilicus, which was afterward enlarged. The sac being exposed, a Spencer Wells's trocar was inserted. The fluid obtained was of a dark-brown color, gruelly or grumous in consistence, without odor. A number of sacs were seen, which were adherent, mostly to the omentum; this latter was very thin and vascular. The hands were inserted and the tumor withdrawn. All bleeding

points were carefully ligated. The pedicle was transfixed and tied with a four-stranded, waxed, carbolized silk ligature, and, after being severed from the tumor, it was dropped into the abdominal cavity. The tumor contained hundreds of sacs, some as large as walnuts, others the size of a man's fist, and even larger. The sacs were thick and weighed two pounds. The fluid weighed sixteen and one-half pounds, and contained blood, pus and granular matter. The left ovary was somewhat enlarged, containing a few small cysts, and was, because of this, also removed. The large tumor was one of the right ovary. There was some bleeding, but the parts were carefully sponged and replaced. The abdominal wound was closed with ten silk sutures. No clamp or drainage tube was used. Time of operation fifty-six minutes. Operation done under carbolic acid spray. Solutions were used as follows: Three gallons for the instruments, hands and sponges; one part of carbolic acid to thirty parts of water; two quarts for spray, one part to forty; two quarts for gauze, one part to forty. The sutures which closed the wound were waxed—soaked in melted wax, nine parts; carbolic acid one part. The hands were oiled with olive oil, nine parts; carbolic acid one part. The wound was covered with the following dressing after Lister: One protective; six layers of gutta-percha cloth; next two layers of carbolic gauze; then one layer of gutta-percha cloth; then ten layers of carbolic gauze. The whole was then covered with cotton batting and a bandage pinned around, and the patient was removed to bed from the operating table.

History after the operation.—Six P. M. pulse 128; respiration 23; temperature 103° F.; 8 P. M. pulse 132; temperature 103 4-5°. Has no pain. Vomited some. 10:30 P. M. pulse 128; temperature 102 4-5; 10:50 P. M. ℥ii of milk; 11:30 P. M. ℥ss liquor opii comp., by enema; 12 P. M. pulse 124; temperature 101 4-5; ℥ii of milk.

May 14, 2:15 A. M., ℥ii of milk; 3:30 A. M. pulse 101; temperature 100¾°; 5 A. M. ℥ii of milk; 6 A. M. pulse 96; temperature 100½; 7 A. M. ℥ii milk. Has slept well most of the night; no pain; no tympanitis. 9 A. M. pulse 100

temperature 100¼; respiration 20; ℥ii of milk; 9:30 A. M. ℥j of whisky; 11 A. M. beef tea ℥j, whisky ℥j; 11:30 A. M. ℥j milk porridge; 12 M. pulse 110; temperature 101¾. The patient sleeps considerably. One P. M. milk; 2 P. M. ℥j beef extract, ℥j brandy. Three P. M. pulse 107; temperature 101¾; by 4 P. M. some pain in back; given ℥ss liq. opii com. by enema, and ℥j whisky by mouth. Urine muddy; contains mucus; ordered lithii brom. ℈ii; liq. potass. acet. ℥iv. M. ℥ss every four hours. The treatment was continued in this manner, except that quinia sulphate was added occasionally (grains four per dose) to the whisky by enema, whenever the temperature was found to indicate its use.

June 11. Pulse 82; temperature 99½; 8 A. M. pulse 70; temperature 98½; 6 P. M. pulse 76; temperature 99. Wound healed except a little spot one half inch long by one quarter inch wide. Patient sat up two hours and a half to-day; feels quite well. The treatment of the other cases, operated upon by Dr. Bozeman, at the New York Woman's Hospital, the past few months, all of whom recovered, was exactly the same. Beef tea, whisky, brandy, milk, quinine and opium, were used from the first, with the happy result of having thus far obtained (100) one hundred per cent. recoveries.

Dr. Olshausen, of Halle, Germany, in his celebrated work on the "Diseases of the Ovaries," already referred to above, page 344, speaking of the treatment after ovariotomy, says: * * * "Rest of the intestinal tract is best obtained, and that literally nothing in the shape of food or drink should be introduced into the patient's stomach the first six to twelve hours, not even water. * * * Even ice taken by the mouth excites peristaltic action; therefore even that must be abstained from. Where there is nausea, even a swallow of water will excite vomiting. The best way to overcome nausea is to lower the head. Strong patients he allowed food on the fourth day, after the operation only. Some old, broken-down, decrepid patients he allowed some nourishment the second day. Bread or porridges, or food which is apt to cause distention of the abdomen and a tension of the young cicatrix in the abdominal wall, he prohibits the patients from

taking for many weeks after the operation. By such a restricted diet during the first week we obtain the result that the bowels do not move. * * * A straining at stool of the abdominal muscles might be followed by a bleeding, causing death, as was the experience of Billroth (*Wien Med. Wochenschrift*, 1877, No. 5), after the extirpation of a spleen."

If the physician follows these precautions, opiates become entirely unnecessary. Try to avoid its administration, O. says, whenever practicable; because if opiates are taken the second week there will be trouble from hardened fæcal masses. For days in succession enemata and cathartics will be needed to dislodge these. They often cause fever and colic. The use of alcohols, of quinine, preparations of salicylic acid, cold baths, etc., after ovariotomy, Olshausen abhors and considers dangerous, and he says they act like hitting a stream of water! They are powerless in diminishing the fever. Local depletion, applications of ice or poultices, and any other medication is contra-indicated, except hypodermic injections of morphia in extreme cases, which O. prefers to the internal use of opiates "for the reasons stated."

Dr. Bozeman's remarkable success in ovariotomy he ascribes in a great measure to the early use of nourishment—quinine and opium—contrary to the opinion of Dr. Olshausen and many other eminent ovariotomists, and he therefore lays the greatest stress upon this method of his after treatment, which has proved so eminently successful in his hands.

Case II.—Miss M. McC., aged forty-five years; Irish; admitted May 3, 1878. Nullipara. Has been sick one year. Ceased to menstruate two years ago. Had profuse hæmorrhage from womb (metrorrhagia) in February, 1877, which continued until June of the same year in less amount. Continued flowing profusely on and off until January, 1878. Had no flow till March 15, continuing till April 10; since then had no flow. Menstruated first at eleven years. Amount always profuse. Had dysmenorrhœa the first day of the flow. Frequent and painful micturition since February. Bowels move once in six to seven days. Pain in the back; a great deal also in the left hip, groin, legs and thighs during

the past year. Appetite and weight good. Tumor in abdomen, which grew rapidly of late. Uterus three inches. Has ascites. Dr. Thomas diagnosed uterine fibroid. Dr. Emmet's diagnosis is doubtful. Dr. Bozeman was doubtful at first, but after repeated examination thought patient had a double cyst, or perhaps a tumor of both ovaries. Dr. Bozeman also thinks there is ascites. Uterus movable apart from the tumor. Measurements: Circumference 37 inches; Left A. S. S. to umbilicus 9 inches; Right A. S. S. to umbilicus 8½ inches; Pubes to umbilicus 8½ inches; Ensiform Cartilage 7½ inches; uterus 3 inches (Bozeman) 3½ (Thomas.) Fluctuation very distinct; navel pouting. Percussion flat from the R. A. S. S. to umbilicus, and down to L. A. S. S. When turned on her side flatness remains below umbilicus, but changes above when lying down; flatness extends four inches above umbilicus. Patient has never been tapped. Walls are not adherent. Left lumbar region flat, hence the tumor is one of the left ovary; smaller on the right side.

Patient consents to the operation, which was performed by Dr. Bozeman, on May 17, 1878 (time of operation sixty-two minutes), in the same manner as the first herein reported. On opening the peritoneal cavity a yellowish colored fluid, amounting to five or six quarts, continued to flow for several minutes (ascitic fluid). The tumor was ovarian, of large size, and was firmly attached by large, strong bands to the abdominal walls on the left side below the umbilicus. It proved to be a myxo-fibroma of the ovary.

June 14. The wound perfectly healed, and patient was entirely well. Nourishment, medication the same as stated in case No. 1. Cases three and four also operated upon by Dr. Bozeman, on November 1 and December 16, 1878, respectively, did not materially differ from the two cases herewith reported, and the after treatment was also in every respect similar, with the satisfactory result of their complete recovery. Up to April, 1879, within the past ten months, Dr. Bozeman had removed nine ovarian tumors, three being single and three double, from six patients, who came under his care in the Woman's Hospital. All of these have been completely cured.

Having given the outlines of the histories of the first two cases, together with some points regarding the difference of opinion as to the propriety and usefulness of early nourishment and medication, it was not deemed necessary to add the details of the other cases; but simply the fact of their recovery seems to bespeak for Dr. Bozeman's views the attention of the profession.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I. *Kentucky the First State of the Union in which Anæsthesia was Employed in the Operation of Ovariotomy.*

DEAR SIR:—From reading the various interesting reports of the proceedings of the State Medical Society of Kentucky, which met at Danville, May 13, to erect a monument to the memory of Ephraim McDowell, the first ovariotomist, I find no mention or allusion, not even in the masterly oration of Dr. Gross on the occasion, to a somewhat important event in the Kentucky history of this operation. I refer to the first employment of anæsthesia, which has contributed so largely, not only in our own country, but throughout the civilized world, toward perfecting the operation of ovariotomy and leading to the brilliant results now embalmed in the hearts of hundreds of living women who would to-day be in their graves had it not been for the inestimable advantages of this agent. In conversation last evening with my friend, Dr. L. A. Sayre, President-elect of the American Medical Association, who was present at the Danville ceremonies, he informed me that no allusion was made by any one, on the occasion, to the circumstance of Kentucky being the first state to lead off in this operation with the use of anæsthetics; and this is my reason for trespassing on your kindness for a corner in your columns to present a few facts bearing upon the subject.

In October, 1846, sulphuric ether, or letheon as then called, was first employed as a pain-destroyer in a surgical operation

by Dr. Warren, of Boston. Only one operation of ovariotomy in this country was performed during this year, which was by Dr. John L. Atlee before the date above given. In 1847 Dr. Robert Thompson performed the only operation for that year; but no mention is made of the fact that letheon was employed. Both operations unsuccessful. In November, 1847, Professor Simpson, of Edinburg, employed for the first time chloroform as an anæsthetic. On March 15, 1848, Dr. Clay, of Manchester, England, performed his first ovariotomy under the influence of chloroform—successful. On March 21, six days afterward, Mr. H. G. Potter, of Newcastle, performed a similar operation under the influence of chloroform—unsuccessful. On April 6, sixteen days later, Dr. Henry Miller, of Louisville, Ky., performed in that city ovariotomy under the influence of chloroform, upon a woman from the state of Indiana—successful—second case in the world under anæsthesia. During this year there were three other ovariotomies performed in this country, though they were after Dr. Miller's. Only one of the three successful.

Now, owing to the shortness of the time between Dr. Clay's operation and that of Dr. Miller—twenty-two days—and the great distance, with the Atlantic intervening, it was not possible at that date that there could have been any communication between these two surgeons as to the advantages to be derived from anæsthesia in the operation; and the inference is that the latter acted entirely upon his own judgment in deciding to employ the agent, which had not been done before in this country.

Kentucky, therefore, in weaving her chaplet of laurels from the justly great operation inaugurated by the bold and fearless hand of McDowell, might have added to it also the one of Professor Henry Miller, who, to say the least of him, was among the ablest contributors to the revival of the operation, and as such, his memory is deserving of the highest recognition. The teachings of this able and good man still have a strong hold on the affections of his numerous pupils scattered throughout our broad country; and, as one of the number, I insist upon his claim to originality and superior

judgment, as being the first to employ in his own country anæsthesia in the operation of ovariotomy.

The failure of Dr. Gross to mention the name of Prof. Miller in this connection, in his otherwise able and just review of the labors of other cultivators of the operation of ovariotomy since it was given to the world by McDowell, was due, no doubt, to an oversight of the dates above given and not from any disposition to be unjust, as every body knows.

The writer, at the time of Prof. Miller's operation, was a private pupil of Dr. Gross and had been in the habit, almost daily, of administering for him chloroform in his operations; and it was from this circumstance that Prof. Miller invited him to give the anæsthetic to the patient in question, to which incident in the American history of ovariotomy he refers there with no little pride. Very truly yours, Nathan Bozeman, 296 Fifth Avenue, May 27, 1879.—*Med. Record.*

ART. II. *The Intravenous Injection of Ammonia.*

During the winter of 1877–'78, while serving as assistant in the physiological laboratory of Bellevue Medical College, I made a number of experiments upon dogs with reference to the action of intravenous injections of ammonia. For this purpose I used the ordinary aqua ammonia (containing ten per cent. of ammonia gas), diluting it with an equal bulk of water. This solution, if dropped upon the tongue, is highly pungent and irritating, but does not vesicate, the stinging sensation caused by it passing away entirely in a few minutes. I chose for experiment dogs in which the viscera had been exposed for purposes of vivisection and which had become exhausted from loss of blood and the depression attending the entrance of cold air into their thoracic and abdominal cavities. I waited in such a case until the heart had almost ceased to beat, its rhythm being disturbed and its inefficient contractions no longer deserving to be called pulsations. I then injected into a convenient vein half a drachm of ammonia solution. After a period varying with the distance of

the vessel selected from the heart, and with the rapidity of the circulation in the particular case, a marked change is observable. The heart had a moment before been dark and congested, its right cavities engorged and the contraction of its fibres weak and uncertain. Suddenly the systole acquired new energy, which emptied the distended right ventricle into the lungs and filled the aorta with fresh oxygenated blood; the heart itself became bright red again as the new supply flowed in through the coronary arteries. It is impossible to do justice to the striking picture presented by these phenomena as they rapidly succeed each other beneath the eye of the experimenter. The circulation was almost immediately re-established and the animal, if anæsthesia were not too complete, moved and showed signs of life. In the course of fifteen or twenty experiments I never failed to obtain the result above described.

In my wards in Bellevue Hospital I have several times injected one drachm of ammonia solution into the veins of patients apparently moribund, and have always succeeded in stimulating them much more powerfully than I could do by other methods. The prompt and marked effect in some cases is almost startling to those who have been accustomed to see hypodermic injections of whisky and ether, inhalations of nitrite of amyl, etc., employed to no purpose under similar circumstances.

On one occasion a man came in a great hurry, having been notified that his brother was dying of phthisis in one of my wards. Notwithstanding his haste, the sick man was already moribund and unconscious when he arrived. Pitying his disappointment at being too late for a few last words, I injected a drachm of ammonia solution into my patient's cephalic vein. In five minutes the man who had appeared almos dead was sufficiently restored to speak, and half an hour elapsed before he again became unconscious. The effect of the stimulant was so marked that I had some difficulty at first in convincing the astonished visitor that his brother had not "taken a turn and was getting well again."

Case.—Man forty-five years of age, with cirrhosis of liver

and ascites. Has been tapped three times; fluid accumulating rapidly; has grown weaker very fast during the past three weeks; now dying of asthenia; unconscious; pulse scarcely perceptible; surface cold and moist.

1st. Six half-drachm doses of whisky administered hypodermically. No effect.

2d. Six half-drachm doses of ether administered hypodermically. No effect.

3d. Inhalation of ammonia. No effect.

4th. Inhalation of nitrite of amyl. Slight increase in force and rapidity of pulse. No sign of returning consciousness.

5th. One drachm of ammonia solution injected into a superficial vein of forearm. In twenty seconds increased action of heart. Pulse good at wrist. In three minutes patient answered incoherently something about being uncomfortable and tried to turn on his side. Could be roused and his attention attracted for about fifteen minutes; then became unconscious again. Died half an hour later.

Case.—Moribund from phthisis. Unconscious; heart acting very feebly. Intravenous injection of ammonia caused the heart to act vigorously, and partially restored consciousness for about ten minutes.

Three cases like the last, presenting no feature worthy of special description, but important as corroborative evidence.

The next case deserves more careful attention, being the first in which I have been able to observe the patient long enough to satisfy myself that no bad effects follow the injection of ammonia directly into the circulation.

Hester Mahar, aged forty-seven; Irish; single. Admitted to Bellevue Hospital, April 29. On admission there was ascites, which had commenced a month before and was probably due to cirrhosis of the liver. Right pleural cavity nearly full of fluid; heart displaced to the left. No evidence of cardiac or renal disease. Patient very weak and compelled, from dyspnœa, to maintain a sitting posture. Abdomen tapped; seven quarts and eight ounces of clear serum withdrawn. Patient much relieved. Stimulants and nutritious diet ordered.

May 1.—Patient very weak. Does not seem to suffer much from dyspnœa though the right side is nearly full. Considered advisable to postpone thoracentesis until the patient is stronger.

May 3.—Patient still very weak. Dyspnœa not marked.

May 4.—Called by nurse to see patient. Found her breathing very little; weakness seeming to obscure the expression of dyspnœa. Almost unconscious. Can not be made to notice anything or swallow what is put to her lips. Fluids poured into her mouth run out again. Eyes vacant, pupils dilated; jaw fallen, tongue dry and brown.

Thoracentesis performed with the assistance of three members of the house-staff. Ninety ounces of clear serum drawn off. During the operation, which lasted about twenty minutes, fifteen or twenty half-drachm doses of whisky were administered hypodermically. In spite of these efforts at stimulation, the pulse which had before been weak, now disappeared entirely at the wrist. The impulse of the heart could scarcely be felt over the præcordia and the respirations were shallow and ineffectual, not seeming adequate to the inflation of the lung just relieved from the pressure of the fluid. The condition of the patient was so unpromising that my colleagues of the house-staff who had been assisting me, were of opinion that she was dying and that further treatment was useless and even absurd. Expressing themselves to this effect, they left me, giving up the case in their own minds and taking no further interest in the matter. While I was obliged to admit that the case was hopeless, judged by ordinary standards, and beyond the reach of ordinary stimulants, I could not help feeling that heroic measures were specially indicated. The source of trouble—fluid compressing a lung and displacing the heart—had been removed; if the patient could be stimulated to breathe deeply and profit by its disappearance, there seemed to be good reason to hope for her recovery. Selecting a prominent superficial vein in the radial region, I exposed it by an incision through the skin. I then injected slowly into it a drachm of ammonia solution, taking care that the point of the hypodermic needle was free in the

lumen of the vessel. This done I placed my hand over the patient's heart and waited. In fifteen seconds I felt a marked increase in the force of pulsation. In about two minutes there was a strong pulse of a hundred, which was plainly perceptible at the wrist. A minute later the patient sighed deeply; the color came back to her lips; her eyes moved and began to show signs of returning intelligence. On being urged she swallowed, without difficulty, two ounces of strong egg-nog. After a few deep inspirations, she breathed more regularly and easily; her pulse was strong and tense, ranging between 100 and 110. Half an hour afterward she was perfectly conscious, and reported herself comfortable, though weak. Pulse 90, regular and strong. Respirations 26, easy and natural. Swallowed easily and willingly small quantities of egg-nog. During the afternoon and evening patient continued to improve. Pulse 80–90, and strong. Respiration 20–30, and easy. Patient passed a good night, sleeping most of the time. Was bright and refreshed in the morning.

May 7. Steady improvement since last note. Sat up for two hours to-day and ate a lamb-chop with relish.

May 17. Patient sits up nearly all day and is gaining strength.

N. B.—Improvement has been uninterrupted since the injection of ammonia. No depression has been observed following the stimulant action of that remedy, nor has there occurred an unpleasant symptom which could be attributed to it.

The cases described seem to satisfactorily establish:

1. That the intravenous injection of ammonia is a prompt and powerful means of stimulation, acting efficiently in cases where other measures are of no avail.

2. That no bad effects follow its employment.

While the importance of the above deductions is obvious as a matter of general therapeutic interest, they seem to have a special significance in connection with those operations whose object is the removal of mechanical obstructions to respiration—I mean thoracentesis, and more particularly

laryngotomy and tracheotomy. Thoracentesis is not, perhaps, very often an emergency; but laryngotomy and tracheotomy, done in cases of croup, œdema glottidis, etc., generally fail to save life, because performed too late—the patient being too much exhausted to breathe in the air for which a new entrance has been made. Artificial respiration, hypodermics of whisky and ether, cold affusions, etc., are resorted to in vain in many instances—the machinery of life can not be set in motion again, and the cases die for want of efficient stimulation. Now, would not the intravenous injection of ammonia, in connection with artificial respiration, save many of these patients? It being proved that the treatment is without danger and followed by no bad effects, this question should not long remain unanswered.

In conclusion, I would call attention to the fact that it is not easy to perform intravenous injection through the skin. The vein collapses under the necessary pressure, and the needle is apt either to stop short and not enter the vessel at all, or to transfix it and direct the injection into the cellular tissue beyond. The only safe method to pursue is to dissect down upon the vein and expose it; the needle may then be carefully introduced until the point is felt free in the interior of the vessel.—GASPAR GRISWOLD, M.D., in *Med. Record.*

ART. III. *Treatment of Intestinal Obstruction.* BY S. MESSENGER BRADLEY, F. R. C. S.

The important question, "How to deal with doubtful cases of intestinal obstruction," suggested for debate at the last meeting of the British Medical Association, by Mr. Jonathan Hutchinson, was not seriously taken up until Mr. Pridgin Teale adopted the opposite side, at a meeting of the Yorkshire Branch, held in Huddersfield last November.

Mr. Hutchinson advanced the argument that exploratory incisions, in cases of doubtful diagnosis, are unjustifiable; while Mr. Teale contends that such exploratory incisions are wise and proper measures to adopt, and even looks forward to a time when "peritonitis—traumatic, ovarian, or puer-

peral—will be treated by opening and washing out the abdominal cavity and emptying the intestines."

In this present paper, besides offering a general support to Mr. Hutchinson's argument, I would desire specifically to formulate the following propositions: 1. Exploratory incisions, in cases of doubtful diagnosis, are unjustifiable; 2. Acupuncture is an inefficient and even dangerous remedy; 3. Cases of intussusception should, with rare exceptions, be left to nature.

I take it for granted that, in cases where the diagnosis is not doubtful, neither is the treatment doubtful: *e. g.*, that when we are able to decide upon the existence of an internal hernia, or upon a constriction by bands, or upon the existence of a volvulus, the plain duty of the surgeon is to open the abdomen and to release, if possible, the captive bowel. To these cases I do not here refer, but confine my remarks entirely to instances where the symptoms do not justify a positive decision. Thus it is manifest that the question becomes, in a great measure, a question of diagnosis. Let us, then, briefly consider the means at our disposal for coming to a conclusion in these difficult cases. The classical signs on which we have to rely are pain, vomiting, and (apparently) insuperable constipation. Now, these symptoms are not only vague, but in the highest degree misleading. They may each and all be present without intestinal obstruction, and each be absent when intestinal obstruction exists, though not perhaps all at the same time. Mr. Hutchinson dwells forcibly upon the doubt which often surrounds these cases, and gives examples how, in spite of every care, mistakes arise. It is not, perhaps, necessary to multiply illustrations of this nature; but I may briefly allude to two instances where I have been misled.

The first case was that of a dog, belonging to Mr. Thomas Windsor, of this city, that I saw with him about six years ago. All the usual signs of obstruction were present: pain, vomiting, constipation, to which tympanitis was soon added. Knowing that dogs are somewhat prone to internal hernia and invagination of intestines, Mr. Windsor (who almost unceasingly watched the case) came to the conclusion that there

was obstruction, and accordingly opened the abdomen. Nothing of the kind, however, existed; and Mr. Windsor, out of pity for the suffering creature, destroyed it the same day. On examination, it was found that all the symptoms proceeded from an attack of enteritis.

The second case was that of a middle-aged man I saw lately, with Mr. H. M. Williamson, in whom symptoms of obstruction had existed for upwards of a fortnight. Mr. Williamson had passed an O'Beirne's tube, but encountered, he thought, some obstruction in its thorough introduction. There was troublesome vomiting of a fæculent character, and the patient was apparently becoming steadily worse. The symptoms had come on somewhat gradually, and he informed us that, years before, he had a somewhat similar attack, though not of so prolonged a character. In spite of this assertion, both Mr. Williamson and I were so impressed with the actual existence of mechanical obstruction, that we advised his removal to the infirmary, where it was decided I should perform colotomy the following day. The man, however, never came; and, on meeting Mr. Williamson some weeks later, he informed him that nature had anticipated our interference by a copious evacuation, and that the man was quite well again.

It will, indeed, probably be conceded by the advocates of exploratory incision, that the abdomen must often be opened when no obstruction exists, so that the question at once arises: Is this an error of any gravity? Now, Mr. Teale would have us believe that, with proper precautions, it is not a very serious matter; but I am, for my own part, inclined to regard it as one of the most serious things that can happen to a man. From what I have seen, I should judge the risk of peritonitis to be a very immediate and terrible one, and indeed I can not recall a single case in which I have seen the abdomen opened to relieve intestinal obstruction that has not terminated fatally, though, I am able to add, I can not recall a single case (with the exception of the dog before mentioned) in which such operation was undertaken without discovering the existence of mechanical obstruction. I might

quote, as illustrative of the extreme peril of even slight peritonitis in these cases, the history of a man under my care at this infirmary last year, where the symptoms were so definite and clear that we felt no doubt as to the diagnosis, and therefore performed laparotomy. In this case, a knuckle of bowel was found strangulated at the internal abdominal ring; it was readily found and readily released. No case could have looked more favorable for a happy issue, yet this patient died within twenty hours; and, as *post mortem* examination proved, there was no pathological apology for death beyond a slight splash of peritonitis. It is true that antisepticity may do something towards averting this tendency, but it will not always avert it; and, even if putrefaction and consequent septicæmia be kept away, still peritonitis may occur, just as peritonitis occurs without any external wound at all.

I might mention a more recent case, in which I a fortnight since opened up the inguinal canal to seek for the site of strangulation in a case of a hernia reduced *en bloc*. Here also the stricture was at the internal ring, but the bowel was sphacelated, and did not admit of return. An artificial anus was consequently formed, and the stricture divided. The man went on well enough up to the sixth day, when he suddenly died, with a low temperature and having suffered no pain. All that was discovered after death was a slight smearing of recent lymph upon some loose-lying coils of intestine. There was no putrefaction, and no fluid in the abdominal cavity.

I am not, from such limited number of cases as I have seen, going to attempt inductively to build up any general principle; but I think we may fairly deduce the fact that laparotomy in these cases is especially dangerous, on account of the tendency to inflammation which exists and the danger with which such inflammation is fraught. It is not correct to liken the operation to ovariotomy. Here, as I have heard Dr. Thorburn paradoxically say, the worst case is often the best—the explanation being that these worst cases have often been subject to repeated attacks of peritonitis, which, from the adhesions to which they give rise, constitute an element

of difficulty in operating; but, at the same time, in the rough usage to which they have subjected the peritoneum, constitute an element of safety. Again: laparotomy seems to me to differ *toto cælo* from ordinary herniotomy; in the latter, the opening in the peritoneum is very small, the time of exposure short, the handling of bowel and peritoneum almost *nil*; in the former operation, we have exactly opposite conditions, every one of which materially enhances the danger: the opening is large, the search often difficult and tedious, and consequently the exposure long-continued, and the handling of the bowel and peritoneum necessarily severe.

I would not, however, condemn the general adoption of exploratory incisions by my own impressions of the great liability to, and danger of, sequential peritonitis; but would also invoke the evidence afforded by some of the very cases which the advocates of the operation cite in support of this theory. Mr. Bryant, for example, in the *Lancet* for May 25, 1878, relates a case at length, in which he performed enterotomy in the right groin for the relief of doubtful obstruction. I will quote from the report itself.

"William B., aged 57, admitted into Guy's Hospital on February 5, 1877, for constipation, sickness and violent abdominal pain. His family history was good, and he himself had always been healthy until his present illness, which came on, some six months before admission, with vomiting and violent abdominal pain; the abdomen also became hard and swollen. From this time up to Christmas, these attacks recurred periodically, generally about once a week—the bowels being always constipated. Since Christmas, the attacks had been more frequent—twice weekly or more. The vomit had a fæcal odor. He took many powerful purgatives, but none opened his bowels freely. On an average, he had a motion *naturally* about every four days." His condition continued much the same till April 29, when Mr. Bryant performed right inguinal enterotomy. The case went on satisfactorily, and he left the hospital on August 20. I quote the next entry from the report. "On November 26, he came up to report progress. His general health was much improved. His bowels

acted fairly well, some motions passing *per rectum.* Occasional attacks of abdominal pain. He had an instrument adapted to the opening in the groin, which collected the liquid fæces which passed, and which previously was his great trouble." Mr. Bryant comments upon the case as follows: "With respect to the nature of the case, there is much obscurity. The original one, that it was one of cancer, can hardly now be entertained, as the general health has so much improved since the operation, and, beyond the fact of the intestinal obstruction, there is no evidence of such a disease. I am disposed to think that the attacks of obstruction to which he has been subjected, and which eventually called for operative interference, will be found to be due to some peritoneal change by which the intestines had been bound together, and the passage through them, and more particularly through the small intestine, had been interfered with."

Now, what is the natural inference to be drawn from this case? According to Mr. Bryant himself, it was certainly not one of cancer—and that it was not is clear enough; but is it not almost equally clear that, with the exception of having two ani, the condition of the man in November was essentially the same as it was in April? How can this be cited as evidence in favor of exploratory incisions, when it is only an additional case to prove that the operation, if generally adopted, will often be unnecessarily performed? Take, again, the cases mentioned by Mr. Teale. I regret to say, though six are alluded to, the only record which I have of his paper details, and that imperfectly, but one. This was the case of a clergyman, whose abdomen he opened and where he found some obstruction, the nature of which is not particularised, but which is stated to have been of such a nature as not to admit of removal; and, therefore, it is difficult to see how the operation could have benefited the poor man. Difficulty being experienced in returning the distended intestines (a difficulty, by-the-bye, which is a very present sourse of trouble in these cases), Mr. Teale resorted to a number of small incisions, through which flatus escaped, and this permitted an easy reduction of the bowels. The

patient lived for nine days, which appears to have surprised Mr. Teale very much: a feeling which I apprehend his professional brethren will very generally share.

I certainly can not see that either Mr. Bryant or Mr. Teale, by the cases they quote, advance the validity of their argument, that the abdomen should be opened in doubtful cases; and, reflecting upon the frequency with which it must perforce be unnecessarily opened if we resort to laparotomy, and at the same time bearing in mind the great peril of peritonitis consequent thereon, I am led to say that, unless the circumstantial evidence enable us to decide, beyond all reasonable doubt, that intestinal obstruction does exist, and, further, that we can with equal confidence decide upon its nature (I mean as to its removability or not), laparotomy is unjustifiable, and therefore should be discarded.

I must pass on to say a few words about acupuncture. I think it is a very general belief of our *confreres*, the physicians, that acupuncture is as perfectly safe as it is simple; but in this opinion I, as a surgeon, can not concur. I regard it indeed as a bad operation, on the double ground that it is inefficient and dangerous. Any relief afforded by the escape of flatus through the hollow needle must necessarily be very transient, inasmuch as the cause which produces the gas, not being removed, will quickly produce it again, so that the operation must be oft times repeated, and that sometimes, not merely *de die in diem*, but *de hora in horam*. This in itself is an evil; for an operation, though it be but the prick of a needle, is a source of a certain amount of trouble to most patients. Equal relief is often procurable by systematic kneading, rubbing the abdomen in the course of the colon; and this method has the further advantage of occasionally inciting peristaltic action, which may prove positively curative. Acupuncture is, however, subject to a more serious objection than inefficiency; it is often found that the withdrawal of the needle is followed by the escape of a slight quantity of liquid fæces along with bubbles of air, and this is very likely to engender peritonitis, which will almost certainly prove fatal. I can positively affirm that I was once

the witness of this occurrence, in which the death was as clearly traceable to the acupuncture as any effect can be to any cause. For my own part, therefore, I strongly discountenance the practice of acupuncture in cases of real or assumed intestinal obstruction, and resort to methodical kneading, or the taxis, as preferable methods.

My last remarks have reference to the treatment of intussusception; but here I speak with much diffidence, as my own experience is very small. An examination of the statistics of intussusception shows decidedly in favor of operative interference; so far as I have been able to make out, the proportions are about forty per cent. recoveries in cases which have been operated on, against twenty per cent. in those left alone; but, on the other hand, the reported cases operated on are extremely few in number, and have always been, and this is no small matter in the hands of first-class men like Hutchinson, Howard Marsh, Howse, etc. My objections to interference in these cases are founded upon the (as it appears to me) impossibility of determing whether nature is not, in the first instance, able to effect a cure by, so to speak, reversing her handiwork; or whether, if she prove unequal to this unaided, the artificial inflation of the bowels with air or gas may not give her the necessary fillip; and, lastly, whether, if even this prove insufficient, a natural cure may not still be effected by the invaginated portion sloughing away and being passed *per rectum*. I must not, however, dogmatise. I myself sadly want more light; and hope that surgeons, "older in practice, abler than myself," may shed this needed illumination upon a subject which is to me, I confess, a dark and difficult problem.—*British Meaical Journal.*

Paludal Torticollis.—M. Jules Simon records a case occurring in a child four years old, who suffered every day about the same time from spasmodic contractions of the sterno-mastoid, lasting four or five hours. It had previously suffered from several attacks of intermittent fever. It recovered under quinine treatment.—*Canadian Jour. Med. Science.*

ABSTRACT DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."

CONDUCTED BY EDWARD MILLER, M. D., LOUISVILLE, KY.

ON TENTING. By FRED. C. COLEY, L. R. C. P., London.—The operation of dilating the uterus with tents is one which is often difficult, and always more or less painful and dangerous; nevertheless some of the difficulties may be avoided by proper means. When the uterus is to be fully dilated it is most convenient to commence with laminaria; and when the os internum is sufficiently patent to admit the point of the index, to complete the dilatation with sponge tents, or to commence dilating with graduated sounds. As a rule, a normal uterus can be dilated with sounds, even at one sitting, up to No. 12, without the use of any force-involving danger, or even much pain, thus avoiding so much time spent in the pain and dangers of tenting. Where the difficulty of introducing a tent is due to crookedness of the uterine canal, a small uterine sound or Sims's uterine probe may be used to straighten the canal; a laminaria tent slipped in beside it, and on the withdrawal of the sound, a second tent can be introduced in its place. In ordinary cases Dr. Barnes's tent introducer, made on the pattern of a catheter cut short, with the stylet projecting, is very convenient. But in difficult cases it is too feeble, as it easily bends. Dr. Coley in such cases uses a pair of forceps, closing with a simple catch, which bears a general resemblance to a uterine sound with Sims's handle. A great difficulty with laminaria tents is their tendency to slip out partially, well dilating the cervix, but leaving the os internum *in statu quo*. The best plan to avoid this is to pass a tent one-third inch less than the uterus into the uterus, and then a second longer tent if possible the whole distance, otherwise, just into the cervix, to dilate the os externum. Whilst the uterus is being dilated the vagina should be syringed with warm antiseptic lotion, about every three hours. To avoid the difficulty usually experienced in withdrawing the tent a piece of whip-cord, long enough to reach one or two inches out of the vagina, should be substituted for

the loop of silk. A hole is bored through a hollow laminaria tent, about half an inch from the point. The two ends of the string are passed inward through the hole from opposide sides, and brought out through the bottom, thus half encircling the tent on the outside, and effectually preventing its tearing. The best instrument for introducing sponge tents is a simple stout spike, with a shoulder, to prevent the tent from being jammed upon it.—*The Obstet. Journal of Great Britain and Ireland.*

Antiseptic Osteotomy for Genu Valgum. By William Macewen, M. D.—The most suitable age for operating in knock-knee and bow-leg is from eight to about twenty years, but successful results take place after the latter age. In the young the bones are softer and yield more readily; in the older subjects the bones are hard and tend to split at right angles to the instrument, unless great care is used. Dr. Macewen states that following his operations the patient complains of little or no pain, and there is no rise in the temperature. He considers the form of the chisel a matter of great importance. If a wedge of bone is to be removed a carpenter's chisel, with one straight and one beveled edge, is a suitable instrument. In using this the straight edge is kept toward the surface which is to remain in the limb, the beveled edge toward the part to be removed. But this form of chisel has a decided tendency to take a wrong course, and for simple osseous division the chisel should be beveled on both sides, so as to resemble a very slender wedge. It ought to be made of very fine steel, tempered so as to prevent brittleness or too great softness. The latter is the better fault, as the former is liable to leave small pieces of steel in the interior of the bone. The octagonal handle and the blade form one piece. As the blade resembles the transverse section of a pocket-knife, and cuts on the same principle, thus differing from an ordinary chisel, Dr. Macewen calls it an osteotome. Suppose the lower end of the femur is to be operated on. The limb is extended and rests upon a bag of dampened sand. The osteotomy is to be performed about

an inch or an inch and a half above the epiphysis. The epiphysis may be surgically represented by a line drawn across the femur, through or just below the spine, on the inner condyle, for the insertion of the adductor magnus tendon. The prolongation of the synovial pouch on the anterior of the joint is avoided by making the incision in the soft parts, on the inner side of the limb, posterior to the pouch. In the great majority of cases no vessel is wounded, and no ligature is required. The incision is longitudinal, passes through the skin, cellular tissue, and a few fibres of the vastus internus, is made at one stroke of the scalpel, and, treated antiseptically, heals without the production of a single drop of pus. The osteotome is introduced longitudinally into the wound, until it comes in contact with the bone, when it is turned transversely. The bone is then divided from behind forward and to the outer side, and then from before backward and to the outer side. The bone being sufficiently divided a sponge dipped in caarbolized water is placed over the wound, and the surgeon holding this with one hand, which he also employs as a fulcrum, grasps the limb lower down with the other hand, and gives a quick jerk inward, when the bone will snap or bend as the case may be. The limb is dressed antiseptically and a splint applied. The splint is a modification of the half box, the outer portion being carried up like a long splint to about the third or fourth rib, and it projects beyond the posterior splint at the foot. This projection is fixed in the clamp of a bed rest, and so the whole splint and limb are kept motionless and steady. The thigh and knee are fixed to the outer splint, while the lower limb and foot are thrown inward by abundant padding. The surgeon carefully sees that the circulation, sensation and the movement of the toes are all right, and if the temperature remains about normal, and there is freedom from pain and discharge; this ought not to be touched for a fortnight. At the end of that time the wound will be found to be superficial and partly covered with epithelium.—*British Medical Journal.*

PROPYLAMINE IN ACUTE ARTICULAR RHEUMATISM. By JAS. L. TYSON, M. D.—This alkaloid has long been employed on

the continent of Europe, and has a high reputation for every form of rheumatism. Professor Bartholow, in his work on "Materia Medica," speaks of it as moderating the fever, and as decidedly shortening the duration of the disease, and Dr. Gaston extols it as a prompt and efficient remedy, subduing the pain in from twenty to forty-eight hours. Repeated trials convince Dr. Tyson of its merits. It is important that the alkaloid and its chloride be pure, and Dr. Tyson recommends the preparations of Messrs. Nichols & Co., of Boston, and those of Messrs. Rosengarten, of Philadelphia, as reliable. Some medical authors have a settled conviction that this disease can not be cut short, but must run its course and will yield to no treatment but palliative. Dr. Tyson claims that he, himself, as well as others, have time and again "broken up" an acute attack of acute rheumatism in periods of five to ten days without a vestige of pain or swelling being left, and not a trace of heart complication, by the employment of salicylate of sodium or vinous tincture of colchicum, separately or in combination. Where from idiosyncrasy these remedies can not be used, propylamine or its less disagreeable chloride may be tried with advantage. The dose of propylamine is six drops every two hours; of the chloride two grains may be given in the same manner. The chloride may be administered so as not to leave an unpleasant taste in the mouth combined as follows :

℞ Propylaminæ chloridi, grs. xxiv.
Aq. menthæ piperitæ,
Aquæ, āā f. ℥iij.
M. Sig. A tablespoonful every two hours.

The joints are wrapped in cotton batting. Patients are usually convalescent in from five to ten days. A tonic of quinia is advisable when rheumatic symptoms have subsided. No disturbance or appreciable influence was manifested in the therapeutic action of the propylamine other than a gradual abatement of fever, pain and swelling, and all the distressing nervous concomitants of acute articular rheumatism.—*Phila. Med. Times.*

Antiseptic Surgery. By Faneuil D. Weisse, M. D.—Free drainage of wounds relieving the tension from effu-

sion of blood and serum is doubtless an important factor in Mr. Lister's system. But this alone will not prevent surgical fever, pyæmia and septicæmia. The sequences of these secondary phenomena are: First, germs from the air obtain access to the fluids effused at the surface of the wound; second, the putrefactive process is initiated, and putrid fluids bathe the wound; third, these putrid fluids absorbed, the secondary phenomena of surgical fever and septicæmia follow. The use of an antiseptic or germ-killing agent is common to the five methods of dressing wounds, while in four of them raw cotton is employed. Raw cotton prevents the access of germs to the wound by filtering the air that permeates it, and trapping the germs with which it is laden upon the fibres of its exposed surface. The modus operandi of the five methods may be epitomized as three ways in which germ implantation at the surface of the wound is prevented: First, by the continued application of a germ-destroying agent; second, by the initial application of an antiseptic, and subsequent prevention of the access of germs to the wound; third, by the continuous application of a germ-destroyer and a germ-trap. Dr. J. R. Wood, in his open method of treatment with the continuous application of a watery solution of carbolic acid and balsam of Peru, fulfills the first; Mr. Lister, Mr. Callender and Dr. Guerin, the second; and Mr Gamgee, with his continuous dressing of oakum and cotton, the third. Some of Mr. Lister's precautionary measures—such as the spray—are unnecessary; but to him is due the credit of having pointed out the way to effect the triumphs in the surgery of to-day. The antiseptic method insures rest to the wounded part and free drainage therefrom, and where coäptation of the wound is resorted to, favors primary union. The successes of surgery formerly were occasional, not uniform or continuous; but antiseptic surgery, by preventing putrefaction in the wound, has given precision to surgical prognosis. Besides which, it has broadened the field of operative surgery, by enabling us to resort to operations, which, without its protective influence, would be unwarranted, or at least would be unwarranted in the light of statistics of the opera-

tions performed in days gone by, when antiseptic surgery was not..—*Medical Record.*

Poisoning from the External Use of Tobacco. By William O'Neill. M. R. C. P., London.—The patient was a robust woman of forty, afflicted with varicose veins of the body, and suffering from a wound on the leg caused by an accidental blow. The bleeding had stopped, the patient had fainted, and was only partially revived when Dr. O'Neill saw her. He found her extremely prostrated, having a scarcely perceptible pulse, and a pale, cold skin bathed in a profuse, clammy perspiration. The pupils were dilated, and in a faint whisper she complained of dizziness, dimness of vision and confusion of thought. There was pain in the abdomen with constant nausea and vomiting, and on removing the bandages and examining the wound, a handfull of chopped, wet tobacco was found firmly pressed on the wounds, which were deeply stained by it. The surrounding skin was stained in a less degree. The patient had felt unwell from previous applications of pinches of tobacco to stop slight bleeding, but had failed to connect the indisposition with the tobacco. The tobacco was immediately removed, stimulants given, the wound well cleansed, and a mixture containing strychnia, which according to the Rev. Professor Haughton, is the true antidote to tobacco. Under this treatment the patient gradually improved but did not entirely recover for several days. In this case the symptoms of tobacco poisoning were well marked, and are worthy of note when the rarity of the mode of introduction of the poison into the system is taken into consideration. In some parts of England tobacco is occasionally used as a domestic remedy for arresting hæmorrhage. In this case the bleeding was stopped, but as tobacco does not contain any astringent principle, the handful of chopped leaves acted merely as a compress or as a means of entangling the blood and thus allowing it to coagulate. The urgent symptoms in this case soon set in, for the patient was seen about three-quarters of an hour after the application of the tobacco, and yet she had

fainted in the interval. Absorption must, therefore, have been nearly as rapid as if the tobacco-juice had been injected sub-cutaneously.—*The Lancet.*

CONTRACTED KIDNEY. By WILLIAM S. ELY, M. D.—Contracted kidney is a chronic form of kidney disease to which the terms "interstitial nephritis," "renal sclerosis" and "granular atrophy of the kidney" have been applied by different writers. Though authorities differ about its mode of production, all agree that the weight of the kidneys is reduced; that they are tougher than normal; that the capsules are often thickened and unusually adherent, and when torn off, leave a granular surface. The cortical substance is greatly diminished, and on microscopic examination the tubular structure and its contained epithelium are seen to have undergone extensive wasting. In addition there is hypertrophy of the left ventricle of the heart, without valvular lesion, and this is deemed as compensatory and conservative. This is the most insidious and easily overlooked of all chronic kidney diseases, as its beginning is seldom recognized. Occasionally the first premonition is a fatal convulsion, or an apoplectic fit. As a rule, however, there are certain symptoms referable to the nervous and digestive systems, and the discharge of an excessive quantity of urine of low specific gravity. Ordinarily there is a faint trace of albumen in the urine, and a few hyaline casts may be detected, but the most serious of kidney lesions may be in progress without either albumen or casts demonstrating its presence. Dr. Ely believes, however, that in the exact determination of the quantity of the urine and urea passed daily, we have an element for diagnosis more important than the profession has generally supposed. Albumen may be absent, casts may be absent for weeks continuously, but when in any non-hysterical patient the urine is excessive, and the urea is habitually more or less deficient, and there is profound nervous and dyspeptic disturbance, and especially when we have with these conditions hypertrophy of the left ventricle of the heart without valvular lesion to produce it, we are justified

in the assumption of renal contraction as the cause—an assumption which time will probably develop into a conviction. Dr. Ely's object is: (1) To call attention to renal cirrhosis as a distinct affection, with hypertrophy of the left ventricle of the heart as a constant factor. (2) To raise the question whether there is any such condition as fatal diabetes insipidus, independent of organic kidney disease. (3) To impress the fact that for the diagnosis of renal cirrhosis, long continued examinations of the entire quantity of urine voided in successive twenty-four hours, and estimates of its contained urea, are necessary. (4) To prove by clinical experience that albumen and casts may be absent from urine for three weeks when contracted kidney is far advanced, without headache, vomiting, dropsy and uræmic amaurosis.—*Med. Rec.*

THE THERAPEUTICAL VALUE OF DRUG-SMOKING. By REGINALD E. THOMPSON, M. D.—Drugs may be made to enter the system, (1) by the skin; (2) by the mouth into the stomach; (3) by the rectum; (4) by subcutaneous injection; (5) by the blood-vessels; (6) by the mouth into the lungs. This latter form of administration is not used as much as it should be. The few vapors that are used are of modern date and no form of drug smoking is officinal. Patients, therefore, have to resort to various patent remedies, and, as the benefit they receive from them is often great and immediate, the physician is compelled to advise the continued use of such objectionable means. Dr. Thompson thinks that physicians should free themselves of the reproach of being beaten by outsiders, and suggests the following means of making medicated cigarettes: The best paper for the purpose is the Swedish filtering paper, and in order to make it burn with certainty it should be dipped in a weak solution of nitre. In order to disguise the disagreeable odor of burnt paper, the best addition is a few drops of the tincture of tobacco made with 2½ ounces of the leaf to a pint of diluted alcohol. The following formula represents the basis of each cigarette: Swedish filtering paper, size 4 in. x 2½ in., potassæ nit. gr. ¼, tinct. tabaci, m x, olei anisi, m ⅛. A solution of any drug

can then be prepared and, the paper having been floated through the solution in a flat dish, when dry can be cut into any size, and the dose thus accurately measured, The cigarette is made by rolling the paper lightly around a slightly tapering stick of the proper size. The nitre and tobacco in healthy subjects have no appreciable effect in the above-mentioned dose. But the $\frac{1}{64}$ of a grain of extract of opium produces dizziness in a few minutes in healthy adults, and may be considered the initial dose. The extract of stramonium is used in the same dose. The smoking of opium is especially adapted for cases of harassing cough; the topical effect of the drug is immediately obtained without any part of the dose being wasted on other tissues, and, moreover, the objectionable effects when given by the stomach are avoided. Opium-smoking is particularly useful in cases of laryngeal ulceration where deglutition is painful, in the undeveloped forms of asthma characterized by night cough, and in the dyspnœa of asthma, preventing the night attack by inducing sleep. This method of administering medicines far surpasses the results obtained by sub-cutaneous injection in the effect produced by a small dose.—*The Practitioner.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I. *Intestinal Obstruction in a Child.* By W. H. DAY, M. D.

Intestinal obstruction in a child: Treatment by Belladonna and gradual injection of warm water poured into the rectum through a funnel and india-rubber tubing: Recovery. W. S., a healthy-looking boy, two years and a half old, was admitted into the Samaritan Hospital under my care on March 4, 1879, at 12:30 P. M. He had been taken suddenly ill on February 23, at 6 A. M., when he got out of bed, apparently in great pain, rubbed his abdomen, and cried. Shortly afterwards, he vomited a quantity of yellow, slimy fluid. The day before the attack, he had been in his usual

good health, and his last meal, at 5 P. M., consisted chiefly of a small fried sole. His parents, thinking that he was suffering from "biliousness," gave him some castor-oil, which failed to operate, and the child continued in the same uncomfortable state. On the morning of the 24th, as he seemed worse, another and larger dose of caster-oil was given; and, this having no effect at the end of two hours, his mother administered a dose of jalap. Although he had vomited at intervals from the commencement of the seizure, a very small hard motion was passed after the last remedy. His friends, however, notwithstanding this apparent indication of improvement, considered him to be getting worse, and they took him to a medical man, who prescribed a powder and mixture, which the child's stomach rejected at every dose. On the 25th, although the abdominal pain and vomiting had increased, the mixture was persevered with, but without the least effect on the bowels. On the 26th, he was worse and becoming prostrate. Mr. Saunders, of Thayer Street, saw him, and ordered a powder and mixture; but his stomach would not retain a single dose, and the water he drank to assuage his thirst (which had been excessive from the beginning) was no sooner swallowed than it was vomited. On the 27th, he was still worse, and in the evening the pain in the abdomen was very severe. He was put into a warm bath, and a linseed poultice was applied over the abdomen. On the next morning (the 28th) the abdominal pain was more violent, and there had been no action of the bowels. Next day (March 1) he was in the same condition; pain, vomiting, and prostration were the chief symptoms. A powder was given, and a dose of stronger mixture prescribed every four hours. On March 2nd, he passed about a drachm of solid fæcal matter. A little champaigne was given, followed by an injection of castor-oil and turpentine, which failed to act on the bowels. He vomited a large quantity of grass-green fluid, and was much exhausted. Next day (March 3rd) he was much worse, vomiting more frequently, and appearing extremely prostrate. The limbs were so cold that, notwithstanding the application of a hot-water bottle and

flannel to the feet, they could not be kept warm. An enema of caster-oil was ordered, which returned, followed by some thick slimy mucus, tinged here and there with a faint pinkish hue.

On admission into hospital, he was extremely exhausted and helpless. The eyes were sunken in the orbits; the cheeks were cold and pallid; the pulse was thready and 160 per minute; the respiration was calm; the tongue was coated with a thick fur; the lips were dry; and there was considerable thirst. The child lay with its head buried in the pillow, rolling it from side to side occasionally, and at intervals was restless and cried out from pain. No external hernia could be found. On passing the finger into the rectum as high as the sigmoid flexure, no fæcal matter could be detected, nor any descent of bowel. There was no distension, nor dulness of the abdomen, nor any prominence. He was put into a warm bath for a few minutes, and afterwards a large linseed poultice was applied round the abdomen and back. A little iced milk was given now and then, and a teaspoonful of mixture containing belladonna every hour. At 2:30, he had taken two doses of the mixture, the last being retained on the stomach. He had remained quiet for a few minutes, and then became restless from pain. An ounce of warm linseed-oil was thrown into the rectum. At 4:30, after consultation with my colleagues, Mr. Spencer Wells and Mr. Meredith, a tube was passed up to the sigmoid flexure; about two yards of India-rubber tubing were attached; and then warm water was gently poured through it from a funnel, at a varying height, according to the effect it produced; but it was soon returned to the amount of a pint. Mr. Wells and I carefully discussed the question of opening the abdomen to release any constricted or invaginated intestine; but we agreed to wait for the effect of the belladona and injection, as there was no tympanitic distension, and no positive poof of mechanical obstruction, further than a contracted or paralysed portion of intestine might account for. At 8:30, there was no return of sickness, and the child had kept down two doses of the belladonna mixture. After passing the finger into the rectum

and moving it about in all directions, some flatus escaped. The pulse was 160 and very small. Warm water was again passed through the tube into the rectum. At 10 P. M., he had taken milk freely, and there was no return of sickness. No urine had been passed since his admission, but the hypogastriam was resonant.

Next morning at 6 A. M., the bowels acted loosely. The fæces were of a light brown color, and more were passed at 8:30 A. M. Temperature 99°; pulse 140. At 5 P. M., there was another similar motion. The pulse had fallen to 128 per minute; the pupils were of medium size. At 9:30 P. M., pulse 116, respirations 20. He had slept a good deal since last report, dozing the greater part of the afternoon and evening, probably from exhaustion. No urine had been passed except that which had come with the motions. There was some tympanitis, but no tenderness of the abdomen. The situation of the sigmoid flexure was somewhat firm. He was directed to take the belledonna mixture three times a day.

March 6, 10 A. M. The bowels acted. At 10 A. M. and 3 P. M., the urine passed with the motions. The child looked wonderfully better; the eyes were bright, and the pupils of medium size. There was a little more tympanitis than yesterday, but no tenderness of the abdomen.

March 8. The bowels acted regularly. Beef-tea and custard-pudding were ordered.

March 12. The bowels had acted each day since last report; and the urine, for the first time since his admission into hospital, was collected. It was so pale that it could scarcely be distinguished from water; it was of specific gravity 1,004, non-albuminous. He now left the hospital.

REMARKS:—Two questions suggest themselves for consideration. 1. What was the nature of the lesion which existed in this case and produced obstruction of the bowels? In many instances of obstinate constipation the cause is obscure. The first thought that occured to me was that perhaps the child might have swallowed a piece of fish-bone when he ate a sole on the evening before the commencement

of the symptoms. If so, this might have set up irritation in the intestinal canal and caused constriction from reflex spasm of its fibres. The symptoms rather resembled intussusception in the suddenness of the pain, quickly succeeded by vomiting, then constipation, and later on a semi-purulent discharge from the rectum, having a reddish tinge. It is evident that, whatever might have been the cause of obstruction, the symptoms were not acute; for no elevation of temperature was observed, nor peritonitis, nor abdominal distension. So far, then, there was great reason to hope that rest and sedative medicines might overcome the evil; but the prostration of strength, which had been increasing from the commencement of the attack, and the incessant vomiting, high pulse, and drowsiness, indicated some condition more serious than what might be called purely functional constipation. Obscure as the case may be in some respects, we can not dismiss the possibility of a partial invagination of the bowel, giving rise to symptoms of obstruction, aggravated so long as aperients were employed. Then, too, it is not improbable that a mere atony of the intestinal fibre might have been set up as a consequence of some defective innervation: a phenomenon not rare in hysterical women. This view is in some measure borne out by the suppressed urinary secretion, which was a prominent feature of the illness. Mere general atony might be complicated by some profound locai impression acting through the sympathetic system on the involuntary muscular fibre at one point; and the arrest of renal secretion lends some support to this opinion.

2. The importance of rest and atropia in cases of intestinal obstruction is not sufficiently estimated. These are the remedies to employ so long as the symptoms are not of such a character as to indicate a lesion which only an operation could remedy; and more especially should this treatment of rest have a fair trial when the intestines have been irritated by purgative medicines. When urgent symptoms are present, the delay is dangerous; but, in the absence of any external tumor, as a hernia or any prominent swelling beneath the abdominal walls, without either distension or peritonitis,

then we ought to wait and try the effect of rest and atropia. Perhaps the action of belladonna in these cases has barely obtained its due credit in overcoming muscular spasm, and allowing irritated parts sufficient rest to resume their normal functions. The intestinal torpor after ovariotomy, the chronic peritonitis which results from impacted fæcal matter in the intestine in subjects habitually constipated or suffering from hepatic disorder, go to prove that the evil is frequently overcome by rest and belladonna.

It has been shown by various experimenters that atropia produces relaxation of non-striated muscular fibre; that it is capable of paralyzing the muscular fibres of the intestines. In fact, its chief utility is in removing spasm; and its action is acknowledged to be more efficacious in relazing the spasm of involuntary than of voluntary muscles.

Regarding the question of the action of belladonna on the secretions, the case favors the view that those of the alimentary canal are increased under the administration.

I venture to submit the question whether a continuous stream of warm water, poured into the rectum through a funnel and India-rubber tubing in the manner just alluded to, might not be practiced more frequently with advantage, before resorting to more active measures, when there is no certainty of a lesion which an operation only could remove. It is recorded that enemata of warm water have passed the ileo-cæcal valve and traversed the large and even the small intestines. In this way, the fluid has unfolded the invaginated gut in cases of intestinal obstruction; so that we have a remedy of great value when carefully employed. I would add gently rather than forcibly, and repeated cautiously from time to time till the symptoms yield, or become too severe to justify the postponement of an operation.—*British Med. Journal.*

ART. II. *Case of Intestinal Obstruction: Abdominal Section.* By JOHN J. PICKLES, M. R. C. S. Eng., Leeds.

A. R., a fine healthy lad, aged eight, had, for some time before I was consulted, complained of pain in his belly. He

was in his usual state of health until Sunday, January 19, 1879, when, after partaking of some hare soup, he began to feel poorly. A dose of opening medicine was given, and he showed no further symptoms which were considered urgent until Wednesday in the same week, when his parents again gave him both aperient medicine by the mouth and an enema, but reported to me, on my visit next day, that only a small scybalum had passed; his bowels not having been opened properly since the previous Sunday. When I first saw him, on Thursday, the 23d, he was complaining of pain in the body about the navel, furred tongue, temperature slightly elevated, and constipation. He was ordered a calomel powder, and a saline aperient mixture.

January 24. At 10 A. M., there was no relief to the bowels, and the pain was worse. I ordered him an enema with castor-oil, and repeated the powder and mixture. He then had a loose calomel stool, and was somewhat relieved on my evening visit.

January 25. The bowels had not acted since the previous day, and the enemata had been rejected. I then gave him an enema myself, but with the same result; it was returned as quickly as I injected. I introduced my finger into the rectum, but could detect no obstruction within reach. The pain continuing, at 5 P. M. I injected subcutaneously one-eighth of a grain of morphia, which relieved him, and he had a comfortable night until the effect had passed off.

January 26. The symptoms continuing the same, he was ordered to have ice, and very little food by the mouth, and to be kept under morphia subcutaneously. Vomiting commenced in the evening.

January 27. I met Mr. Jessop in consultation at 2:30 P. M. We found the bowels very much distended; the individual coils could be mapped out; the countenance was placid, the pulse good, and the symptoms not extreme. There had not been any passing of blood or mucus. We decided to wait a couple of days, still keeping the patient under morphia, giving nutrient enemata of beef-tea and milk with brandy and a few drops of laudanum every four hours, and only ice by mouth.

January 28. The symptoms were about the same until evening, when there was a return of vomiting, which was relieved by morphia.

January 29. I met Mr. Jessop again, and he strongly recommended abdominal section. The symptoms were not improved; the pulse was weaker; the tongue was becoming dry; the abdomen was tighter.

At 2:15 P. M. the same day, the operation of abdominal section was performed as follows: The patient was anæsthetized by means of Ormsby's inhaler and ether. A spray of carbolic acid was generated in the room by means of Lister's steam apparatus, and was directed on the patient's abdomen for some minutes before commencing to operate. The instruments, sponges, and the hands of operator and his assistants were carbolized by being immersed in an aqueous solution of carbolic acid (1 in 40). Mr. Jessop then made an incision in the median line for about three inches above and the same below the umbilicus. As soon as the abdominal cavity was reached, there protruded through the wound several coils of red congested and very much distended intestine. They were carefully examined, and, at a point somewhere near the termination of the ileum, a collapsed portion of gut was found, and, on further examination, two well-defined extensive patches of peritoneum (covering the portion of small intestine near the collapsed intestine) were discovered, intensely inflamed, and covered with grayish lymph gluing the one coil to the other. On displacing the intestines out of cavity of the pelvis for further examination, a sudden gush of fæcal fluid came from somewhere evidently deep in the pelvis, which was afterward found to be at the cæcum, and along with this fluid were three small concretions, which were found on section to consist of concentric layers of fæcal matter, and were each about the size of a large pea. The pelvis was carefully sponged out dry with carbolized sponges, and it was found that, at the spot from which the escape of fluid had come, the vermiform appendix was lying against the cæcum, intensely inflamed, soft, and almost gangrenous; and it was decided to remove it. The small open-

ing into the cæcum which was left was closed by a circular ligature. No bands of lymph or intussusception were found. Further patches of inflamed and gangrenous peritoneum were found in the pelvis and on the intestines contained therein. The intestines were then returned into the abdomen, being previously reduced in size by means of a small No. 1 trocar to let out flatus. The abdominal walls were brought together by several deep interrupted sutures, and pads and bandage were applied.

After the operation was completed, our patient was very much collapsed, and it was only by means of hot bottles, blankets, enemata of beef-tea and brandy, and very assiduous attention that he could be rallied.

He was then kept under the influence of opium, in pills containing one-third of a grain, when he could swallow, and hypodermic injections when he could not.

January 30. He had passed a good night. The bowels were moved at 9:30 A. M. There was some vomiting. The temperature had gone up to 103°. There was still coldness of the extremities and some degree of collapse, from which the patient never rallied, but died at 9 P. M. the same evening.

No *post mortem* examination was allowed.—*British Med. Journal.*

ART. II. *Two Cases of Intestinal Obstruction Treated by Abdominal Section.* By T. CLIFFORD ALLBUTT, M. D.

The discussion on Obstruction of the Bowels and its Treatment in the medical section of the association last year has been provocative of much useful discussion. I venture to communicate two cases of obstruction of the bowels in which abdominal section was performed. The cases were related to me by Mr. Ockley, assistant to Mr. Dowse, of Skelmanthorpe, under whose care the cases were, and who operated successfully in one of them. The narratives are as follows:

Case 1.—John E., aged 60, a tailor, came under my (Mr. Dowse's) care on April 21, 1877, at 4:30 P. M. On arrival, I found the patient suffering excruciating pain in the left

side, and, upon inquiry, was informed he was suddenly attacked with the pain two days previously, about 2 P. M., after eating a hearty dinner. He described it as if something had fallen in his inside; it was accompanied with faintness and vomiting, but passed off after a short time. To-day, the pain and sickness were more severe and continued. Temperature 100; pulse 82. The bowels were evacuated on the evening of the 19th; he had no motion since, although he had taken opening medicine (castor-oil, etc.), which had all been vomited back. On examination, there was a hard knotty tumour on the left side, high up close to the short ribs, which I thought might be either intussusception of the bowel or perhaps some undigested food which had lodged there. I ordered ice, soda-water and milk, bismuth mixture with henbane, extract of belladonna, and powdered opium (of each half a grain); and a large linseed meal poultice in which was belladonna liniment with plenty of lard, to be changed every three hours.

April 22. He was rather better, and had not so much pain. The tumor had shifted rather lower, and, as the bowels had not been relieved, I ordered an enema of warm water and soap. The other treatment was continued.

April 23, 9 A. M. He was worse; his face had a very anxious fretful appearance; there were more vomiting and pain, always in the same place; pulse 110, weaker; temperature 100°. The tongue was rather furred, for the first time. He was ordered iced brandy and soda-water, and to continue the poultices, belladonna, etc. The pupils were normal. 3 P. M.—At noon, stercoraceous vomiting commenced, and continued every half-hour. I gave an enema of clean water, which came away without the least sign of fæces, and no smell whatever. I gave a hypodermic injection of morphia, and advised the friends to send for Dr. Kilner Clarke, of Huddersfield, in consultation. 10:30 P. M.—Stercoraceous vomiting continuing and coming on every few minutes, the pulse being much weaker; Dr. Clarke proposed operation as the last chance. The abdomen was tender over the part where the pain commenced, and where the lump was left,

and was less swollen on the left side than on the right. He was passing very little urine.

The patient being well under chloroform, the obstruction was found at the commencement of the jejunum, in the form of a stony concretion about the size of a pullet's egg. As it could neither be passed forwards nor backward, it was removed through a longitudinal incision in the bowel (this substance was unfortunately lost). The bowel was so much thinned from pressure that, although it was well stitched with carbolized catgut (the glover's suture being used), it would not hold together. The patient died about 3 A. M., or four hours after the operation.

Query.—Would this case have done better if the operation had been performed sooner?

Case II.—George W., aged 56, a sailor, came under my care on August 21, 1877, at 8 P. M. For about a month he had been suffering from constipation and difficulty in passing his stools; when he did so, it was in short flat pieces like tape, and always with much straining. Sixteen or seventeen years previously he had suffered from inflammation of the bowels; since then, he had always more or less difficulty in passing his stools. For the last fortnight he had passed two stools. The bowels were very much distended, with clear tympanitic percussion all over, occasional paroxysmal cramping all over the abdomen, dullness over the left iliac fosa; and here the patient always pointed as the continual seat of his difficulty. I ordered belladonna, opium, nux vomica, and calomel, in pills; bismuth mixture with prussic acid, ice, soda-water and milk, and belladonna poultices frequently.

August 22, 10 A. M. He was much worse, stercoraceous vomiting having come on during the night, and, as the patient was evidently sinking, I advised an operation. At 3 P. M., the bladder having been emptied, in which there was only a small quantity of urine, the body was opened through the linea alba, and I passed the finger in the direction indicated by the patient, and I found two bands of lymph across the bowel close to the sigmoid flexure. On dividing these, the bowels were almost instantly relieved of a large quantity of accumulated fæces.

August 23, 7 A. M. The patient was much better; pulse 92, temperature 100°. He had two loose motions during the night. He was ordered to take a good nourishing milk diet.

This patient made a good recovery from the operation, but died some time afterward from rupture of a blood-vessel whilst coughing.—*British Med. Journal.*

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

ART. I. *American Medical Association.*

SECTION I.—Practice of Medicine, Materia Medica and Physiology, Dr. Thomas F. Rochester, Buffalo, New York, chairman; Dr. W. C. Glasgow, St. Louis, Missouri, secretary.

The section was called to order by the chairman.

Dr. Davis, of Chicago, read a paper on clinical and meteorological records. His paper was referred to Committee on Publication.

Dr. J. P. Logan, of Atlanta, presented a paper for Dr. Denison, of Denver, Colorado. Subject: Experience of Consumptives in Colorado, and some of the Æro-hygienics of Elevation above the Sea, with conclusions.

After the reading of the paper was commenced, it was on motion of Dr. Davis, of Chicago, postponed until 3 o'clock P. M., Wednesday.

Section adjourned to meet in Opera-house at 3 o'clock Wednesday afternoon.

SECOND DAY.

The section was called to order at 3 o'clock by the chairman.

The paper of Dr. Denison, of Colorado, the reading of which was postponed from Tuesday's session, was ordered read.

Dr. Denison not being present, Dr. Davis, of Chicago, read the paper. Subject: "Æro-hygienics of Elevation above the Sea," with conclusions.

The paper was a very long one, and before Dr. Davis had half finished the reading he was informed by the chairman that his time was out.

On motion Dr. Davis was allowed time to read the conclusions.

Dr. O'Reily, of New Orleans, moved that the paper be received and referred to the Committee on Publication.

This motion was objected to by a gentleman who said he thought if the paper was referred it would seem that the association accorded with Dr. Denison's views as expressed in the paper.

Dr. Davis, of Chicago, said he could see no reason why the paper should not be received and referred; that it contained valuable facts that were well worthy of publication, and it should be published.

The motion to refer it to the committee was then passed.

Dr. Denison asked that the section recommend the Signal Service Bureau to prepare charts to be published with his paper.

On motion of Dr. O'Reily, of New Orleans, the recommendation was granted.

The paper of Dr. L. D. Buckley, of New York, on the use of water in the treatment of diseases, being in order was then presented, and read by Dr. Buckley in clear and forcible style.

Dr. Hopkins, of Georgia, moved that the paper be received and referred to the Committee on Publication.

The paper was discussed by Dr. Porcher, of Charleston, South Carolina, and Dr. Shoemaker, of Philadelphia. The motion to refer was carried.

The address of Dr. Thomas F. Rochester before the General Council was referred to this section, and was here presented to the section by the secretary.

Dr. Rochester called Dr. Lester to the chair.

Dr. Hopkins, of Georgia, moved that the address be received and referred to the Committee on Publication.

This brought out quite a discussion, which was engaged in by Dr. Lyon, of New Orleans; Dr. Porcher, of Charleston;

Dr. Banks, of Griffin, Ga.; Dr. O'Reiley, of New Orleans; Dr. Rochester, of Buffalo, and Dr. Foreman, of the army.

The address of Dr. Rochester was in favor of a national quarantine as a preventive of yellow fever.

Dr. Lyon, of New Orleans, said that the treatment of yellow fever was as well understood as the treatment of any other serious disease. That yellow fever does originate in New Orleans, and that there is never a year that there is not yellow fever in that city that originates there. Dr. Lyon contends that quarantine laws do no good, and as proof he says that during the late war, when there was not and could not be any communication between New Orleans and West Indies, there was not a single year but what there were cases of yellow fever in New Orleans.

He contends that the disease is not contagious, and that it will in future, as it has done in the past, continue to originate in that city. He believes in local sanitary measures instead of the quarantine.

Dr. Hopkins, of Georgia, agreed with Dr. Lyon that yellow fever was of local origin, and that quarantine regulations were useless in preventing the disease.

Dr. Lyon was asked if quarantine did not keep the fever out of Texas. Dr. Lyon replied that it did not, and asked the gentlemen why it did not keep it out of Jackson, Mississippi, which was surrounded by men armed with shot guns.

The question was not answered.

Dr. O'Reily, of New Orleans, said that in a large majority of years yellow fever will originate in New Orleans. He believes that proper sanitary measures will prevent epidemics in that city. He does not favor a national quarantine law.

Dr. Rochester said he had not treated a case of yellow fever in twenty-eight years. That he did not doubt but what there were occasional cases occuring sporadic in New Orleans, but that he believed that the quarantine would prevent the terrible epidemics.

Dr. Foreman, of the army, said that while the fever might originate in New Orleans, there were cities where it did not

originate, and we needed the quarantine against such places as the fever originated in.

The motion to refer the paper was carried.

There being no other business before the association, it adjourned to meet in the Opera-house at 3 o'clock next day.

THIRD DAY.

The section met in the Opera-house at 3 o'clock P. M. Called to order by the chairman.

The paper in order was from Dr. G. F. Cooper, of Georgia, on "Veratrum viride and its uses."

At the expiration of the time allowed Dr. Cooper to read his paper, the doctor had not more than half finished the reading. The chairman asked if there was any objections to Dr. Cooper's continuing the reading. There being no objection, Dr. Coopor finished his paper.

The paper, though a long one, was listened to with marked attention by every one present.

Dr. Shoemaker, of Philadelphia, moved that the paper be referred to a sub-committee to be appointed by the chair. The motion was carried.

The second paper in order was one by Dr. Glasgow, of Missouri, on "Plastic Bronchitis," with cases. This was a valuable and interesting paper. On motion of Dr. Davis, of Chicago, the paper was referred to a special committee to be appointed by the chair.

Dr. Rochester, having to leave the hall to meet another section, he called Dr. Cooper, of Georgia, to the chair.

The next paper in order was one by Dr. Shoemaker, of Philadelphia, on "Inflammation of the Hair Follicles of the Beard."

On motion of Dr. Banks, of Georgia, the paper was referred to a special committee to be appointed by the chair.

There being no other business, the section adjourned.

SECTION II.—Obstetrics and Diseases of Women and Children, Dr. E. S. Lewis, of New Orleans, Louisiana, chairman. Owing to the resignation of Dr. Chadwick, the former secretary, this position was left vacant. Dr. Marcy, of Massachusetts, nominated Dr. Robert Battey, of Georgia, and he

was unanimously elected. Reading of papers was next in order. Dr. Robert Battey read a paper on "Tubo-ovarian Pregnancy"—(case); operation, 5th month—death.

The reading of this paper was deferred until the 7th. The regular business being concluded the presentation of voluntary reports was in order. Dr. Dunster, of Michigan, spoke of the operation of perineoraphy, and his views were very favorably received. The gentlemen engaging in this discussion were Dr. M. A. Pallen, of New York; Dr. King, of Pennsylvania; Dr. Albert Smith, of Pennsylvania; Dr. Greenfield Dowell, of Texas; Dr. Taliaferro, of Georgia; Dr. Beverly Cole, of California, and Dr. Theophilus Parvin, of Indiana.

Dr. Pallen, of New York, presented a number of pessaries for the treatment of uterine displacements.

Dr. Henry F. Campbell, of Georgia, presented a modified stem pessary for the treatment of uterine flexions. Dr. Taliaferro participated in the discussion of the stem pessary. Dr. Love wished to participate, but owing to the lateness of the hour proposed to postpone any further discussion until to-day.

Section adjourned until Thursday at 3 o'clock.

SECOND DAY.

The new gynecological table, devised by Dr. Chadwick, of Boston, was presented by Dr. Marcy, of Massachusetts. The doctor explained the workings of the table to the satisfaction of all present.

The reading of papers being in order the chairman read the paper of Dr. E. Cutter, of Massachusetts (the author being absent), on "The Treatment of Uterine Displacements by the Stem Pessary."

Next in order was Dr. E. B. Turnipseed, of South Carolina, on "New Instrument for Operation for Vesico-vaginal Fistula, with cases." The instrument, when complete, embraces the following: New self-retaining speculum, retractors, large apparatus (used in stitching) bearing a smaller comb-shaped apparatus set with needles, which are clamped when the operation is completed. Curved needles, gold

triple-plated with hard rubber clamps, with springs. Trimmers, dilators on the principle of changeable values, and a hysterotome.

On motion of Dr. Albert Smith, of Philadelphia, the thanks and appreciation of the section were expressed to Dr. Turnipseed for his industry and mechanical genius. The next paper in order was that of Dr. E. Cutter, of Massachusetts, postponed from last meeting. This paper was read by Dr. Dunster, of Michigan, the subject being the "Electrolyses of Fibroids."

On motion Dr. Pallen, of New York, presented large drawings of a lacerated perineum, and from these he demonstrated his mode of operating. He also spoke of the operation of amputation of the cervix, or as he proposed to call it, vaginocervisplasty, for the cure, as we may say, in general sterility. Dr. Pallen is one of the prominent figures in this section, and at the conclusion of his remarks was greeted with immense applause. The chairman appointed as a committee to examine the papers presented to the section, Drs. Dunster, of Michigan; Smith, of Pennsylvania; and Cross, of Arkansas.

On motion of Dr. Beverly Cole, of California, the society adjourned until 3 P. M.

THIRD DAY.

The section met at 3 o'clock in the senate chamber, and was called to order by the chairman.

The minutes were read and approved.

The chairman called Dr. Bartlett to the chair, and the section took under discussion the annual address of the chairman, which had been delivered in the morning to the American Medical Association.

Dr. Smith, of Philadelphia, alluded to the changing of presentations and positions of the fœtus by external manipulations prior to labor. These changes can in many cases be effected with ease and advantage. His efforts to convert a posterior position of the occiput into an anterior one and maintain it, have been uniformly abortive. There is something peculiar in these cases which makes them very obsti-

nate. He does not feel that the question whether the cord is to be ligated early or late after labor is an important one. His practice is to ligate as soon as pulsation in the cord ceases. He does not bandage the abdomen after turning the child in utero.

Dr. Marcy, of Massachusetts, remarked upon Dr. Garland's method of treating prolapse of the cord by rotating the body of the fœtus in the uterus, and thus winding the cord around the body.

Dr. Morris, of Ohio, doubted the propriety and success of these efforts to turn in the eighth or ninth month.

Dr. Lewis explained that the manipulation is then effected with greater ease and safety.

On motion of Dr. Warner, of Boston, Dr. Battey, of Georgia, the secretary, was requested to return to the custody of the section the paper upon "Tubo-ovarian Pregnancy," read by him Tuesday, and that the same be referred to the Committee on Publication.

Dr. Smith, of Philadelphia, opened the discussion on the subject of pessaries. His experience and extended study of the subject of "Pessaries" gave to his remarks a practical value which was fully appreciated.

Dr. Pallen, of New York, differed with Dr. Smith in toto as to the ideology of displacements. He did not believe in the Hodge theory to which it seemed that Dr. Smith adhered.

After further investigation and discussion the section adjourned.

Section III.—Surgery and Anatomy, Dr. Moses Gunn, of Chicago, Ill., chairman; Dr. J. B. Weist, of Richmond, Indiana, secretary.

The chair appointed the following sub-committee: Dr. Briggs, Nashville, Tenn.; Dr. Dawson, Cincinnati, Ohio; Dr. W. F. Westmoreland, of Georgia.

Reading of papers was next in order.

Dr. A. C. Post, of New York, read a paper on "Deformities of Face and Hands," occasioned by cicatrical contraction following a burn, with reports of cases successfully treated.

The following gentlemen participated in discussing the paper. Dr. Quinby, of Jersey City, New Jersey; Brigg, of Nashville, Tennessee; Dawson, of Cincinnati.

A paper was read by Dr. H. O. Marcy, of Massachusetts, on "Aspiration of Knee-joint," with cases. The paper received great attention.

The following gentlemen discussed it: Dr. Boyd, of Quincy, Illinois; Dr. A. C. Post, of New York; Dr. S. D. Gross, of Philadelphia.

Dr. E. B. Turnipseed, of South Carolina, read the following papers: New surgical needle, curved and spring clamp at point; new apparatus for treating fracture of the clavicle, with cases; new method of reducing dislocation of elbow-joint, with cases. They were discussed by Dr. Dodge, of Indiana; Dr. Hughes, of Iowa; Dr. Gross, of Philadelphia; Dr. L. A. Sayre, of New York; Dr. Dawson, of Ohio; Dr. A. C. Post, of New York; Drs. Glenn and Briggs, of Nashville, Tennessee.

All the papers being read, it was in order for voluntary communications. Dr. C. V. Matham, Lawrence, Kansas, read a paper on a report of a case of chronic dislocation of hip-joint. Dr. Dawson, of Ohio, showed some specimens of stones.

SECOND DAY.

Minutes of last meeting were read by the secretary and were approved.

The reading of papers being next in order, Dr. J. N. Quinby, of New Jersey, read a paper describing a case of conservative surgery.

Dr. Lewis A. Sayre, of New York, read a paper on the proof of the value of the treatment of Potts's disease by suspension and the retention in the improved position by the plaster-of-Paris bandage. The paper was discussed by Dr. Maddux, of Maryland; Dr. A. C. Post, of New York; Dr. H. O. Marcy, of New York; Dr. E. H. Dugas, of Augusta, Ga.; Dr. Quinby, of New Jersey; Dr. Byrd, of Illinois; Dr. McGraw, of Michigan. Dr. Sayre concluded it.

Dr. Maddux, of Maryland, moved that the thanks of this section be tendered Dr. Sayre, which was agreed to.

The next paper was read by Dr. J. E. Link, of Indiana, on "Amputations by Open Cone-shaped Method." The following gentlemen participated in discussing it:

Dr. Beck, of Ohio; Dr. H. O. Marcy, of New York; Dr. Byrd, of Illinois; Dr. Quinby, of New Jersey; Dr. Garcelon, of Maine; concluded by Dr. Link, of Indiana.

The next paper was read by Dr. H. F. Campbell, of Augusta, Ga., on "Urinary Calculus," with consideration of its hygienic, etiological, pathological and surgical relations, with 46 cases. It was discussed by Drs. Dawson and Mussey, of Cincinnati, Ohio, and Dr. Dowell, of Texas.

THIRD DAY.

The secretary presented a paper for D. William Scott, entitled "Ecrasure for Removal of Uterine Tumors," invented by himself.

A paper was read by Dr. J. Weist, of Indiana, on "The Treatment of Hæmorrhoidal Tumors by Carbolic Acid Injections." The following gentlemen discussed it: Dr. A. C. Post, of New York; Dr. Byrd, of Illinois; Dr. Dawson, of Ohio; Dr. Quinby, of New Jersey; Dr. Murphy, of St. Paul, Minn.; Dr. Brown, of Texas; Dr. Smith, of Michigan; Dr. Cook, of Louisiana.

Dr. Maddux, of Maryland, read a paper concerning the nature of gonorrhœa.

Dr. Dodge moved that Dr. Maddux's paper be referred to committee without any discussion, which was agreed to.

Dr. T. F. Rochester read a paper entitled "Perityphlitic Abscess Opening into the Bladder and Rectum," with pathological specimen.

Dr. Dawson moved that the regular order of business be suspended, and Dr. Sayre be allowed to apply the plaster-of-Paris jacket.

The motion prevailed.

Dr. Sayre said under no circumstances would he interfere with the regular order of business, as the gentlemen had prepared their papers to be read, and he thought it his duty not to take their time.

The next paper in order was by A. M. Pollock, of Penn-

sylvania, a new instrument for the administration of anæsthetics.

The regular order of business being done, Dr. Lewis A. Sayre, of New York, assisted by his son Charles, applied the plaster-of-Paris jacket to two patients.

The meeting then adjourned.

SECTIONS IV AND V.—This section, consisting of the sections on Medical Jurisprudence and State Medicine, met at 3 o'clock in the Concordia Hall on Marietta Street.

Section called to order by Dr. J. T. Reeve, of Wisconsin, the secretary, who announced that owing to the temporary illness of Dr. John S. Billings he could not be present. It was therefore necessary to appoint a chairman for the session of the section for the afternoon.

On motion of Dr. E. L. Griffin, Dr. J. L. Cabell was elected chairman.

Dr. A. N. Bell announced that by the vote taken in the American Medical Association in the morning the two sections above named had been consolidated. He also announced the death of Dr. Wm. N. Compton, the former chairman of the section on medical jurisprudence.

Dr. Grissom, of North Carolina, paid an eloquent tribute to the memory and virtues of the deceased doctor who had died a sacrifice to the yellow fever, in which he had nobly labored for his fellow men.

The chairman appointed as a committee to prepare proper resolutions on the death of this esteemed physician, Dr. Grissom, of North Carolina, and Dr. Toner, of Washington City.

The first paper presented to the section was by Dr. H. A. Johnson, of Illinois. It was on the subject of the regulation of medical practice by state boards, as exemplified in Illinois. The paper was a full exposition of the thorough reform effected under the provisions of the new law. The thorough acquaintance of Dr. Johnson with the practical workings of this system made his paper of great value as a medical document. The paper was received with the thanks of the section.

Several of the members of the section asked questions as to how the present law in Illinois worked.

Dr. Rauch, of Chicago, spoke fully of the success of the present system of regulation in Illinois, and the good it had accomplished to the people generally as well as to the profession in elevating its grade.

Dr. Gilion, of the United States Army, believed in the thorough regulation of the practice by the state in such a manner as to prevent quacks from imposing on the public simply because they could show a diploma.

The discussion on the question was protracted, and numerous inquiries were made. But for the brief space we are compelled to allow each section, a most interesting report of the proceedings of this department could be given.

Dr. S. E. Chaillè, of New Orleans, read an exhaustive paper on state medicine and state medical societies which held close attention and created an impression by its logical analysis of the question suggested. The paper was a masterly plea for state medicine and its systematization as the only means by which government could perform its high duties to its people.

Dr. Bell moved that a vote of thanks be returned to the author of the paper. He spoke in very high commendation of it, and moved its reference to the general session.

The next paper was a very scientific thesis on "Psycho-physiological Hand," by Dr. E. Seguin, of New York. It was exceedingly interesting, and was closely attended by the joint section. The theory of the paper was that in cases of idiots all education of intellect must begin by education of the senses. He gave a most interesting case of education of an idiot by a Miss Meade in New York.

SECOND DAY.

Dr. Cabell, of Virginia, who had presided over the meeting of this section the previous evening, was on motion elected chairman of the section during Dr. Billing's sickness.

Dr. Grissom, of North Carolina, presented a report from the committee appointed to draw a fitting memorial on the death of Dr. Compton, of Mississippi. The memorial was a beautiful tribute to the memory of the good and gifted man of whom they spoke. The report was signed by Drs. Gris-

som, Toner and Pratt. The memorial concluded with resolutions expressive of the regret of the section at the untimely death of this distinguished Mississippian, and declaring that his memory will be cherished with the virtues his life presented.

Dr. Taylor, of Kentucky, asked the honor of moving the adoption of the resolutions.

Dr. Browning, of Mississippi, seconded the motion, and the resolutions were adopted.

The first business was that relating to state medicine. A paper was expected from Dr. J. N. DeHart, of New Jersey, but he was absent.

A paper on "The New Principles of Protective Sanitation in its Relation to Public Hygiene," by Dr. H. R. Storer, of Rhode Island, was next in order. The author was absent, but his paper was read to the section by Dr. E. S. Dunster, of Ann Arbor, Michigan. It occupied about thirty minutes and held close attention. It was full of historical knowledge and sound suggestions of true sanitary policy.

The paper was referred to the Committee on Publication.

A report by Dr. R. J. O'Sullivan, of New York, on "Intervention of Physicians in Education," was expected by the section, but the doctor and his paper were both absent.

Dr. E. Seguin, of New York, made some remarks on "The Intervention of Physicians in Education," the subject which Dr. O'Sullivan had been expected to treat. His views were forcibly put, and were heard with attention by all.

It was moved that Dr. Seguin be requested to commit his remarks to writing for the future consideration of the section.

Dr. Bell said the more orderly way would be to let Dr. O'Sullivan's paper come up, and Dr. Seguin could then give the section the benefit of his wisdom. The motion was withdrawn.

The section took up some resolutions offered by Dr. Billings, that the American Medical Association recommend that every physician aid the superintendent of the caucus in his efforts to make up his statistics of mortality. That every physician make a record of all his cases from the 1st of June.

Every physician in the United States will be furnished with blanks for filling out the reports asked. The resolutions were adopted.

Resolutions on the organization of the profession in all States were read. It was proposed to organize all members of the profession in good standing into county organizations. The section gave its approval to such a course whenever it may be deemed necessary.

THIRD DAY.

Dr. E. L. Chaillè, of New Orleans, presented a series of resolutions looking to the appointment of a committee on medical organization. On motion the report was adopted.

The report of Dr. Chaillè was referred to the Committee on Publication.

A paper on "The Medical Examiner System of Massachusetts," was read and referred to the Committee on Publication.

The report of Dr. Billings, of Washington, chairman of the section on the question of "hospitals," was read. It was referred to the Committee on Publication with instructions to consult with Dr. Billings as to the manner of publication, etc.

The report was accompanied by diagrams and lithographic illustrations of hospitals for small towns, on approved plans.

Dr. Alban S. Payne, of Virginia, offered a paper on the "Treatment of Small-pox in the Stages of Initial Fever."

The section then adjourned.

SECTION VI. — The Ophthalmology section met in the finance chamber of the senate at 3 P. M., Dr. H. Knapp, of New York, presiding. In the abscence of the secretary, Dr. Scott, of Cleveland, Dr. Calhoun, of Atlanta, was elected secretary *pro tem.* First in the order of business was the election of Dr. E. Williams, of Cincinnati, as honorary president, and Dr. B. A. Pope, of New York, vice-president.

The first paper was read by Dr. Williams. Subject: "Ivory-bony Tumor of the Socket of the Eye."

D. Voorhees, of Memphis, then read an interesting paper "on a case of great impairment of sight, produced by poisonous effects of excessive doses of quinine."

The third and fourth papers by Dr. Knapp consisted of microscopic demonstrations and remarks on a large tumor (sarcoma) of the acoustic nerve, from the practice of Dr. Stevens, of Albany, New York; and, secondly, of a degeneration of the iris and ciliary body probably of a tuberculous and syphilitic nature.

The meeting was concluded by an extensive discussion on the symptoms, the course and the treatment of syphilitic diseases of the cornea.

SECOND DAY.

The section held two sessions—from 9 to 11 A. M., and from 3 to 6 P. M. Dr. H. Knapp occupied the chair. The principle object of discussion was "The Operations for Cataract," on which papers were read by Drs. Pope, Calhoun and Knapp. In the discussion about twelve members took an active part. A paper was presented by Dr. Reynolds, of Louisville, on "The Operative Cure of Cystoid Cicatrix Following Operations for Cataract and Glaucoma." Dr. Smith, of Detroit, read a paper on "The Operative Cure of Xerophthalmia. In conclusion Dr. Knapp presented two anatomical specimens, the one with plastic cyclitis, the other with a chip of brass lying in the ciliary body, and gave a brief history of the cases to which the specimens referred.

THIRD DAY.

The section met in the Finance Chamber of the Senate at 9 A. M.; Dr. Knapp in the chair.

A paper had been expected from Dr. White, of Baltimore, at this session, on "Color Blindness," and a feeling of disappointment was manifest at his absence.

The only paper read was by Dr. Knapp. Dr. Knapp presented a number of specimens, and illustrated on the blackboard disease changes of the eyeball and ear. The paper was intensely interesting, and gave rise to a discussion that lasted until nearly 12 o'clock. Drs. Leartus Conner, Pope, Williams, Calhoun, Smith and Voorhees took an active part.

After the subject had been thoroughly discussed it was announced that all the papers of the section had been read and their work completed.

The section, therefore, adjourned *sine die.—Cincinnati Lancet and Clinic.*

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

DANVILLE, KY., May 20, 1879.

Dr. E. S. Gaillard:

DEAR SIR—In the January number of your RICHMOND AND LOUISVILLE MEDICAL JOURNAL I saw a notice of the almost specific power of bromine over the poison of the rhus. A few days since I met an extreme case, involving the entire face, neck, superior chest and hands. I prepared the article thus:

℞. Bromine, 20 drops.
Olive oil (pure), ℥j.

Mix thoroughly and rub a sufficient quantity into the parts wherever affected, and repeat every three hours; before every third inunction cleanse the parts well with soap and water. In twenty-four hours the case was relieved.

This is such a flattering result, and so far surpasses all former experience, that I deem it worthy of professional trial.

Yours, J. M. MEYER.

CHEMISTRY AND PHARMACY.

"Diruit ædificat, mutat."—HOR.

ANÆSTHETICS.—At the meeting of the French Association of Sciences last year, M. Rabuteau read a paper on the action of anæsthetics, the conclusions of which are given as follows: (1) The ethers have an action on vegetable organisms destructive to life; but the germinative property is not destroyed though germination may be a little retarded. (2) The action of ether is different in cold and warm-blooded animals. If we put simultaneously under a bell-glass a frog, a guinea-pig and a sponge saturated with acetic ether, the guinea-pig survives, but the frog succumbs after a variable, but always very short time. If we inject acetic ether under the skin of a guinea-pig, there is no anæsthesia produced; but it occurs if we put him under a bell-glass. M. Rabuteau explains these facts as follows: The warm-blooded animals

decompose the ether, while the frog does not; whence the division into two classes of the ethers: those that are modified in the organism and those that are not modified. It should be stated here, in passing, that white wine owes its heavy properties to the ether it contains. (3) There are some ethers, the trichloracetates, that have the property of suppressing the sensibility without abolishing motion. They may have perhaps a useful application in obstetrics. It is needful, nevertheless, to make a judicious selection, keeping in mind that the ethers of the ethylic alcohol are inoffensive.

Aconite.—The following are the conclusions from an extended experimental inquiry into the physiological actions of aconite and aconitia, by Dr. G. Hunter Mackenzie, and published in the *Practitioner*, concluding in the number for March, 1879. (1) Aconite and aconitia act primarily on the respiration by their influence on the respiratory center and peripheral sensory branches of the vagus. (2) They have no direct action on the heart, and only affect that viscus secondarily through the medium of the lungs. (3) Their action on the nervous system consists in, first, irritating, and second paralyzing the peripheral sensory nerves and posterior roots of the spinal nerves. They increase the irritability of the peripheral motor nerves, and of the motor columns of the cord. (4) They do not induce muscular paralysis, but, on the contrary, increase the irritability of voluntary muscle. (5) They induce convulsions mainly through their augmenting the irritability of the anterior column of the cord, the motor nerves and muscles. (6) They first increase and, second, diminish temperature. (7) Death ensues from asphyxia and respiratory collapse.

Celloidin, a Substitute for Gun-Cotton.—A new kind of nitro-cellulose has lately been placed on the market by the chemical works of E. Schering, of Berlin. This has been named celloidin, and appears to be a very useful substance, both for the photographer and for the pharmacist. It is put up in plates, which are neither explosive like gun-cotton, nor

readily inflammable. Ignited it burns like paper, and when heated in a test-tube it chars slowly. Its transport by rail, wagon or mail, is therefore unattended with danger. This substance is soluble in a mixture of alcohol and ether in any proportions, and yields a perfectly clear solution, leaving no residue. Each plate weighs about 200 grams (7 ounces), and represents when completely dry, exactly 40 grams of pure celloidin. For preparing medicinal collodion, one plate of celloidin is dissolved in 720 grams of ether without the addition of alcohol, which is already contained in it in sufficient quantity. It is probably produced by moistening a special kind of gun-cotton with a mixture of alcohol and ether, whereby a fraction of the gun-cotton is dissolved to collodion; the latter permeates the undissolved fibres, and the whole is pressed into cakes.—*Schweiz. Wochensch. f. Ph.*, 1879.

An Enterprising druggist advertises his cough medicine in the following manner: "Cough while you can, for after you have taken one bottle of my mixture you can't."

Opium for Smoking.—A new industry but one not likely to receive encouragement, has sprung up in this country lately. It is the preparation of opium for smoking. One factory of the kind is in operation in New Jersey, and two or more in San Francisco. Government officials suspect that the custom laws are being evaded by the men engaged in this business, as they use gum opium of a very low grade, the importation of which is forbidden by law. The import duty on opium prepared for smoking is $6 per pound, and on the crude article, which must contain not less than nine per cent. of morphine, $1 per pound. If these factories are permitted to go on in their work, it is estimated that the government would be deprived of a revenue of at least $300,000 per year. Among the remedies proposed are: to lay a tax of $3 per pound on all opium prepared for smoking in the United States; that each box of it passing through the custom-house shall receive a custom stamp, as in the case of each box of imported cigars, and that the duty on the crude gum

be increased to $2 or $3 per pound.—*American Journal of Industry.*

A Poetic Dose of Squills.—We have several times given specimens of the "scientific verse" in which some of our English contemporaries delight to indulge; but the following effort of the pharmaceutical muse, from the London *Student's Journal* is, on the whole, the best thing in that line we have ever met with:

The *Urginea scilla* is a Liliacean plant,
The bulb of which, when sliced and dried, they bring from the Levant.
As stimulus-expectorant, in grains from one to three,
It is, with ammoniacum, the best in the B. P.;
And mixed with ipecac it will with speed relieve the chest,
While as a diuretic digitalis suits it best.
In grains from six unto fifteen, so Scoresby-Jackson saith,
It may be an emetic, and two dozen caused a death;
For it 's an acrid-soporific poison much to fear,
It purges, brings on strangury, and griping most severe.
There 's soap and ammoniacum and ginger in the pill,
And treacle, and there 's one in five of finely powdered squill.
Acetum Scillæ as to strength is one in eight, or so;
With fifteen minim dose begin and up to forty go;
With it are made the oxymel, so often bad in shops,
And syrups—both from half a drachm as high as sixty drops.
Fifteen drops to half a drachm of tincture is the dose,
And having said it 's one in eight, my rhyme is at a close.

A North Carolina Miracle.—The last miracle heard from was down in North Carolina. There is a wonderful spring there, and a negro bathing in it is said to have turned white. A medical exchange suggests as a rationalistic explanation that it must have been a "cracker" who had never washed in his life before, and was amazed to discover the natural color of his skin.

Uric Acid.—M. Bouley has presented to the French Academy of Sciences, in the name of Dr. Albert Robin, a very interesting note upon a case of uric lithiasis, in the case of an infant of eighteen months. The child appeared to be dying in agony. In vain every ordinary remedy had been attempted, when it was suggested to submit the case to a

chemist. This resulted in the discovery that the child suffered from gravel. But whence could it come? He was fed on goat's milk and they resolved to analyze the milk. In this was found a notable excess of azotic matter. The goat was fed almost entirely upon oats. The child's dietary was changed, and he has recovered. The case has excited wide attention in France and Belgium, as proving the importance of chemical analysis in the diagnosis of obscure disease.

RANCID LARD can be greatly improved in quality by washing it in lime water. This lime-water can be easily made by putting a good-sized lump of lime to a bucket of water, stirring it well, and afterward allowing the lime to settle.—*Confec. Journal.*

GENUINE VOLATILE oil of Eucalyptus Globulus hardly ever appears in the market, the oil being almost invariably distilled in Australia from the leaves of eucalyptus amygdalina, which contains more oil than any other known species of eucalyptus. Eucalyptus Globulus, of which one hundred pounds of leaves yield about six ounces of the oil, grows in not easily approachable districts. The two oils resemble each other very much; that of eucalyptus globulus possesses, however, more therapeutic efficacy, and is alone used for making eucalyptol.

MANUFACTURE OF CELLULOID.—Celluloid is made by dissolving pyroxylin in camphor instead of ether or alcohol. A solution of one part of camphor in eight of alcohol is made; pyroxylin is ground in water, the desired colors added and all water removed from the mixture by pressure; the camphor solution is then added in the proportion of one part to two parts of pyroxylin, the mixture is stirred and allowed to stand in a closed vessel until the solvent has penetrated all parts, when the mass is expressed and formed into the desired shape by means of a hydraulic press, being heated at the same time from 65° to 130°C., when a solid, uniform piece of celluloid is obtained.

STRENGTH OF LIQUORS.—H. Grouven gives the following average percentages of alcohol, as contained in the ordinary liquors.

	Vol., per cent.	Wt., per cent.
Scotch Whisky	50.3	42.8
Irish Whisky	49.9	42.3
American Whisky (old)	60.0	52.2
English Whisky	49.4	41.9
French Cognac (Brandy)	55.0	47.3
Rum	49.7	42.2
Gin	47.8	40.3
German "Schnaps"	45.0	37.9
Russian "Dobry Wutky"	62.0	54.2

The percentage of alcohol in American whisky is usually lower than that given above.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Index damnatur cum nocens absolvitus."

ART. I *Chemistry: General, Medical and Pharmaceutical, Including the Chemistry of the United States Pharmacopœia. A Manual of the General Principles of the Science and their Application in Medicine and Pharmacy.* By JOHN ATTFIELD, M. A., and Ph. D., of the University of Tübingen; Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc. Eighth edition, revised by the author. 12mo., pp. 697, with eighty-seven illustrations. Philadelphia: H. C. Lea. 1879.

A book which has reached eight editions in twelve years, as has this one, needs no commendation from us. An announcement of a new edition, a decided improvement on its predecessor, is all sufficient. This book is more useful to medical students than any other upon the same subject, as it has special references to pharmaceutical and medical subjects, and includes the whole of the chemistry of the United States Pharmacopœia, of the British Pharmacopœia and of the Pharmacopœia of India. There has been much new matter added to the present edition, there are some three hundred new references in the index, the contents have been brought up to date, and the present edition is a decided improvement

on the seventh, published two years ago. The medical student will find this book indispensable, as it embraces just those portions of chemistry in which he is most interested. It is undoubtedly the best work upon the subject now before the public, and is most heartily commended to medical men.

ART. II. *Clinical Treatise on Diseases of the Liver.* By Dr. FRED. THEOD. FRERICHS. In three volumes. Translated by Dr. Charles Murchison. 1879. New York: William Wood & Co.

These three volumes are the third, fourth and fifth in Wood's Medical Library, and enable the physician to obtain very cheaply this standard work. This classical treatise of Dr. Frerichs is translated by a gentleman no less eminent than the author himself, and as we view his work as presented in the present volumes we are reminded of the great loss sustained by medicine in the recent death of Dr. Murchison. The study of diseases of the liver is confessedly difficult. This organ was formerly regarded as the seat of the passions, and lately Dr. Hammond has proposed to aspirate it for hypochondria, thus returning, in a manner, to the ancient doctrines. It is popularly supposed to be the seat of numerous diseases, and when sick the patient as well as the physician too often ascribes it to the liver being out of order. From its great size and numerous functions the importance of diseases of the liver may be readily estimated. It is an exceedingly vascular organ, it is an excretory organ, it is a secretory organ; it forms glycogen to be transformed into glucose as the system needs it, and it separates the cholesterine from the blood and pours it into the alimentary canal. Any derangement of these functions deranges the whole body, and this treatise is designed from a clinical standpoint to assist in the study of such derangements. It is superfluous to say that the work fully succeeds in its object, and translated and edited as it is by a masterhand, it is almost indispensable to the scientific physician.

ART. III. *Demonstrations of Anatomy; Being a Guide to the Knowledge of the Human Body by Dissection.* By GEORGE VINER ELLIS, Emeritus Professor of Anatomy in University College, London. From the eighth English edition. Illustrated. Philadelphia: Henry C. Lea. 1879. 8vo., pp. 716.

The plan of Dr. Ellis in his work is to teach the anatomy of the human body by dissection in successive stages. The attention of the student is directed first to the superficial prominences of bone and muscle, and to the hollows that point out the situation of the subjacent vessels. Next, the cutaneous structures and the different layers of muscles with their appertaining vessels and nerves are examined in succession, so that the several objects between the surface of the body and the bones may be observed in much the same order as they would be met with in a surgical operation. And lastly, the joints and ligaments receive due notice. Instead of beginning with the bones, as is customary in anatomical text-books, Dr. Ellis begins at once in the first chapter a dissection of the head and neck. The plan is one well suited to the study of surgical anatomy, but it requires some previous acquaintance with anatomy, and hence the book is not calculated to supersede the text-books in common use. The work is really a practical anatomy or dissecting manual, and is, no doubt, the best of its kind. The illustrations, however, will not compare favorably with those of Wilson or Gray.

ART. IV. *Hints on the Obstetric Procedure.* By WILLIAM B. ATKINSON, A. M., M. D. Second edition, re-written and enlarged. 8vo., pp. 121; cloth. D. G. Brinton: Philadelphia.

The aim of the author in writing this little treatise is "to divest this branch of medicine of much of its mystery and dread—a dread too often shared alike by physician and patient." The author, a teacher of experience, treats his subject in a way to make it especially useful to the student, but not to the student alone. As Dr. J. Marion Sims remarked

of the first edition, "It is as good for the old as for the young practitioner." Dr. Atkinson believes in the obstetric procedure in cases where it is required, and says in his preface that "The great bug-bear, 'meddlesome midwifery,' has too long acted to deter the physician from the performance of his duty as the assistant of nature in this sacred act of the wife and mother."

ART. V. *Pott's Disease; its Pathology and Mechanical Treatment, with Remarks on Rotary Lateral Curvature.* By NEWTON M. SHAFFER, M. D., Surgeon in charge of the New York Orthopœdic Dispensary; Orthopœdic Surgeon to St. Luke's Hospital. C. P. Putnam's Sons: New York. 1879.

Dr. Shaffer gives a full account in this little book of the pathology and treatment of Pott's disease, or, as he prefers to call it, chronic spondylitis. He divides it into four stages—(1) the prodromal; (2) of pain; (3) of deformity, and (4) of suppuration. All of these stages are not necessarily present in every case. He gives, also, a full account of the treatment he pursues, and expresses his regret that he finds so little to commend and so much to condemn in the plaster-jacket. He would confine the use of Dr. Sayre's apparatus to the comparatively limited number of easily controlled cases occurring below the seventh dorsal. Nor is Dr. Shaffer much more favorably impressed with the suspension treatment. This little book will be of great value to those who wish to study the subject of Pott's disease, and will be a useful warning to those who are in the habit of doing up in plaster-of-Paris every child that complains of pain in the back or belly.

ART. VI. *A Practical Treatise on Surgical Diagnosis; Designed as a Manual for Practitioners and Students.* By AMBROSE L. RANNEY, A. M., M. D., Adjunct Professor of Anatomy and Lecturer on Minor Surgery in the Medical Department of the University of New York. Pp. 390. William Wood & Co. 1879.

This book, Dr. Ranney says, was published at the request of his private class. It is intended to aid the memory of students by presenting the symptoms of disease in marked contrast, and as a book of reference for physicians to aid in differentiating surgical diseases and injuries. To attain this end the book is divided into eight parts, each part devoted to a separate system, organ, disease or injury. As it is intended only as an aid to diagnosis, the pathology and treatment of disease is omitted. It chiefly consists of tables for the differential diagnoses of diseases and injuries. Thus, hip-joint disease is studied differentially by the the side of nine different affections, which, to a certain extent, simulate it and may be confounded with it. Each differentiation is, in most instances, so arranged as to allow the symptoms of each to be reviewed separately by reading from above downward; while by reading across the page the points of contrast become prominent. At the end of the book are mentioned those authors to whom Dr. Ranney is indebted for many of the statements advanced. The publishers have done their work well, and we trust the book will meet with the favorable reception it merits.

ART. VII. *Essays on Surgical Anatomy and Surgery.* By JOHN A. WYETH, M. D., etc. New York: Wm. Wood & Co. Pp. 262. 1879.

This volume contains a prize essay upon the surgical anatomy of the carotid arteries; a prize essay upon the surgical anatomy of the innominate and sub-clavian arteries; a prize essay upon the surgical anatomy of the tibiotarsal region; an essay upon the surgical anatomy of the obturator artery, and notes upon the surgical anatomy of the hip-joint. The first essay contains an analysis of seven hundred and eighty-nine cases of operation on the carotid artery, and the careful measurements of the arteries and its branches in one hundred and twenty-one subjects. The second essay contains an analysis of three hundred cases of operations on the innominate and sub-clavian arteries and the observations of fifty-two subjects. The other essays are based upon extended anatomical research. The book will be valuable to surgeons and students of anatomy, even if they do not indorse all of the author's conclusions.

All of the above-mentioned books may be obtained from John P. Morton & Co., Louisville, Ky.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Nature of the Yellow Fever Poison.—Dr. H. D. Schmitt, Pathologist of Charity Hospital, New Orleans, has had numerous opportunities for investigating the nature of the poison of yellow fever. He takes a decided stand against the germ theory, claiming it to be a disease depending, like small-pox, scarlet fever, measles, etc., upon a specific poison of animal origin, a product of the diseased human organism itself. In support of this position, he adduces the immunity from a second attack, which it possesses in common with all other specific diseases. The pathology of the disease also distinguishes it from those affections in which a *contagium vivum* has been found, for in place of the venous congestion, ecchymosis, softening of the spleen, and loss of coagulability of the blood, which are characteristic of this class, we have arterial congestion, normal spleen, and retain coagulability of the blood, although the latter has been erroneously reported as lost. In severe cases hemorrhages may take place from different mucous membranes, but hemorrhagic effusions into the interior organs are but seldom observed. The most characteristic phenomenon, however, is the fatty infiltration or degeneration constantly met with in a number of organs. The poison emanates from the body of the affected individual only in the gaseous form, and in this form may be absorbed by another individual, or, adhering to clothes, bedding, etc., may be transported to distant places, and there become other centers for distribution. As in the case of putrefaction, septicæmia, the poison increases in intensity with each individual through whom it passes; explaining the fact that the fatality of the disease increases as the epidemic advances. No bacteria, or other living organism are found in the blood of patients in any stage of the disease. The prevention of the disease involves the interesting and unsettled question of quarantine, and the perfect isolation of the first cases would certainly appear to be the most important sanitary measure.—*New York Medical Journal.*

Functional Obstruction of the Intestine, Probably of Hysterical Origin.—Dr. G. W. H. Kemper gives the following interesting history: The patient was a young woman, twenty-four years of age, who had been married one month. She at first suffered from slight nausea and indigestion, followed by a light and easily controlled attack of diarrhœa. Two or three days after the cessation of the diarrhœa some uneasiness was felt in the bowels, and a purgative was administered, but rejected from the stomach. Vomiting became more severe, and, on the fourth day, was stercoraceous. The temperature and pulse were nearly normal, and the patient merely complained of uneasiness in the abdomen. This region was thoroughly examined, and also the rectum and vagina; no knot or invagination could be discovered. Belladonna was given in moderate doses, and when active restlessness occurred, morphia, combined with minute doses of calomel. Copious injections of warm water were thrown daily into the colon by means of elastic tubes. The body of the patient was occasionally inverted and manipulations made over the abdomen. Upon the fourteenth day of the disease three copious alvine evacuations occurred in rapid succession. During the entire illness the constitutional disturbance was but slight, and the patient's strength and embonpoint were well preserved. Three days after the bowels were moved the patient became morose and melancholy, followed by alternate fits of crying, laughter, and screaming. This hysterical condition continued for three days, and then suddenly disappeared. This hysterical condition, together with the fact that none of the symptoms indicated intussusception, serve to show that the intestinal obstruction was probably of an hysterical nature.—*The American Practitioner.*

Iodine in the Treatment of Malarial Fever.—In corroboration of Dr. Willibrand's assertion that iodine is a specific remedy for malarial disease, comes the evidence of Dr. J. W. Wadsworth, Saltillo, Mexico, who has treated over three hundred cases of intermittent fever with this drug. He has records of two hundred and sixty of these cases,

many of them being chronic cases extending over various intervals of weeks or months. In the severe cases ten to fifteen grains of quinine were given at first, followed by compound tincture of iodine, m x. to m xv.; in the severest cases arsenic was added. In every case the paroxysm was arrested within twenty-four hours, and twelve doses, or four days of treatment were sufficient to guarantee a cure, with the exception of eight relapses, six being on the fourteenth day, one on the twenty-first, and but one on the seventh. In not a single instance, though under the most miserable hygienic surroundings, did there occur a failure to effect an immediate cure, when the medicine was taken as directed. Quinine and arsenic have often failed the writer, but iodine never.—*New York Medical Journal.*

Ovariotomy — Consecutive Pregnancy — Delivery at Term—Recovery.—Polaillon.—Patient, æt. 32, gave birth to an infant six years ago. For a year back she has noticed a swelling in the right side of the abdomen, the growth of which has given her so much pain and inconvenience that she was compelled to forego her occupation as chamber-maid. Eliminating, in the differential diagnosis, floating kidney, tumor of the intestine, or mesentery, fibroid of the uterus, the diagnosis of tumor of the right ovary, probably cystic, was given. Patient had menstruated regularly and her condition was good. Ovariotomy was performed Nov. 21, 1877. The instruments and sponges were dipped in pure alcohol, and then in 40 per cent. carbolic acid, but no spray was used. The tumor was multilocular. Two points of adhesion were ligatured with catgut on account of great vascularity. The ligatures were cut short and left in the abdominal cavity. The main pedicle was tied with an iron wire, and the incision closed with silver sutures. Oakum batting was laid over the wound, and this covered over with collodion. The patient made a good recovery. About the middle of April, 1878 (five months after the foregoing operation), this patient became pregnant. January 8, 1879, she came to the Lying-in Hospital and was delivered of a female child, which was stillborn.

Weight, 2,700 grammes. The labor was natural, and the recovery prompt. While there is nothing extraordinary in the fact that a woman may become pregnant having only one ovary, yet it does seem unusual that a fecundated ovum could be carried to term in a uterus bound down to the abdominal tissues by the cicatrization following ovariotomy. Emiliani de Faluza operated in 1815 upon a young woman who gave birth to twins the year following. Koeberlé, Love, D'Olier, Marzolo and Balding also report similar cases. — *France Medicale.*

Lactopeptine.—This preparation, which is composed of pepsin, pancreatine, diatase (or vegetable ptyalin) lactic and hydrochloric acid, and sugar of milk, has already acquired an enviable reputation, both in this country and abroad, in the treatment of many forms of dyspepsia, and in digestive troubles in children. We have used it in a number of cases, and its use has, in our hands, been invariably followed by good results. Many practitioners use pepsin, but in this preparation we get not only the pepsin, but also several other substances of great, if not equal, importance in aiding the digestive process. Not only do men like Loomis, Sayre, Percy, Packard, Meigs, Dawson and Yandell recommend it, but the entire mass of the profession, so far as they have tried it, seem to approve of it as well. — *Ohio Medical Recorder.*

Preparation of Imitation Kumys.—Fill into a strong champagne bottle good, fresh, unboiled cow's milk to such a height that after the addition of 30 grammes (1 oz.) of granulated or powdered sugar, and after corking, there would still be left at least an inch of empty space below the cork. Before corking, add a piece of fresh compressed yeast; a teaspoonful of good beer yeast may be taken. The contents of the bottle are well shaken, repeatedly, then the bottles are placed in the cellar, where they are turned up and down a few times during the day. From and after the fifth day the mixture is ready, and may be drunk to about the twentieth day. It is best to prepare about six bottles full at a time,

refilling each after it has been emptied and cleaned, so that the treatment, after being begun, may not be interrupted. On opening the bottles, the contents are very apt to foam over, hence the bottle should be opened while being held over a plate. It should never be opened where there may be any furniture or dresses about, which might be soiled by spattering. A good milk wine or kumys should have a homogeneous appearance of the consistence of thin cream, should be effervescent when poured out, of an acidulous, agreeably vinous odor and taste, and should not be full of lumps, or taste like butter milk. On first using kumys it produces loose bowels, but this effect soon passes off.—*Pharm. Zeit.—New Remedies.*

The Plague In Russia.—We find in the *Nedjelja* some very interesting contributions to the history of the plague in Vetlianka. They were made by Madame Bestoujeva, the sister of Professor Jacobi, both brother and sister having taken a very active part in nursing the sick during the epidemic, and doing everything in their power to diminish the sufferings of the people. The period of the greatest mortality in Vetlianka was between December the 3d and 18th, the panic at the same time being almost incredible. Before the quarantine had been enforced, a great many persons fled; some crossed the Volga, others went to small farms where they kept their cattle, and which were at some distance from the infected place. A number of fugitives fled to some villages in the steppe, where they hoped to find a refuge; but the rumor of the epidemic had spread too far, the inhabitants persistently refused to admit them, and they died of hunger and cold in the steppe. Three temporary hospitals had been erected in the Stanitza, but there was nobody to nurse the sick, and the dead remained unburied for days, as it was impossible to prevail upon the people, either for love or money, to have anything to do with the dead or dying. The hospitals were unheated, and the sick had not a drop of water to drink, although suffering intensely from the burning thirst which is one of the symptoms of the disease; and to

these hospitals the inhabitants carried, or, rather, dragged their sick friends and relatives. Mothers brought their children, brothers and sons their fathers, mothers, sisters; all were thrown pell-mell into the rooms that were already filled with the dead and dying. This description is so horrible that one might be inclined to think it exaggerated, but the following two histories, quoted by Madame Bestoujeva, show it to be only too true:

1. The History of Andatga Schtchcr Cakova.—On the 18th of December, Madame Bestoujeva, accompanied by a physician and a feldscher, on entering one of the temporary hospitals, found several dead bodies in the first room, and in the second a woman lying on the floor. She said that she had had neither food nor drink for three days. On the first day she had been fortunate enough to find the remnants of a frozen watermelon, but had to fight for it with some hungry dogs who came into the room. She had had nothing on the second and third days. Not being able to leave the room for weakness, she passed her motions there. All the rooms were very cold; so cold that some water was found frozen in a vessel. The patient was very thinly clad. She complained of feeling very feverish, of pains in the feet and the head, and of an intolerable thirst. Something was given her to eat, and she was brought into another house. At the examination, a wound, with ragged edges, was found in the right groin; it had evidently been caused by the abscess. No other abscesses or spots could be found on the body; the tongue was dry; the pulse good. The patient soon began to recover. She had no remembrance when and how she came to the hospital, but it was subsequently discovered that, when she felt ill, her own father brought her to the hospital, and left her there. He could not be prevailed upon either to take her back or even to visit her, saying, "If she is ill, she ought to die."

2. The History of Loukerga Lobanova.—The patient, a girl, aged 9, had been taken ill at the same time with her father, mother, and two brothers. The whole family was taken to the hospital, and on the evening of the same day

nearly all her relatives had died. She passed that night in the same room with the corpses of her deceased friends and other patients who had died in the hospital. On the next morning, when the bodies were cleared away, she begged to be removed to another hospital. Her wishes were complied with; she remained twenty-four hours in the other place, and again spent the night in the same ghastly company. On the next morning, when the people came to remove the dead, she had barely enough strength left to utter a groan and move her hand feebly, to show that she was still alive, just as the people were going to throw her into the cart with the dead. She was taken to the third hospital, which was also overcrowded with patients. Here, however, she began to feel a little better, but she was still tortured by a burning thirst, and not being able to obtain a drop of water, she crawled to the door of the room, and after remaining there for some hours in a state of unconsciousness, she managed to get up and creep to a neighboring house, where the people were a little more humane. They pointed to the bath-room, and threw out to her some clean linen, and then let her come into the house. The girl said that when she fell ill she felt an intolerable headache, an excruciating thirst, pains in the præcordial region, nausea with occasional vomiting, loss of strength, and giddiness. From the very first, she also felt a pain in the right groin, which became intolerable at the slightest touch. Soon afterward, a swelling broke out in that place; it increased hourly till it reached the size of a hen's egg, when it burst. She could not say on what day of her illness that had happened. She subsequently became quite well. These two stories are a true picture of the state in which those poor creatures were who had been taken to the hospitals. Those who remained at home often fared still worse. Nobody cared for them; they were locked up in empty rooms, and often found a refuge in cold kitchens, where none thought of giving them help of any kind.—*British Medical Journal.*

New Experiments in Anæsthetics.—The Paris correspondent of the *Lancet* writes: An experiment of consider-

able practical interest was performed a few days ago by MM. Labbé, Bert, Preterre, Lafont, and Regnaud, for the purpose of testing the practical application of Professor Bert's researches on the anæsthetic properties of mixed nitrous oxide and oxygen under tension. You are doubtless aware of the character of M. Bert's researches, which were communicated to the Academy of Sciences in one of its recent sittings. But the experiment to which I allude was a practical one, applied to a human being. A chamber with compressed air having been prepared, the experimenters entered it with a young woman of twenty, who was to be operated upon for that most painful operation, ingrowing nail. As soon as the barometer marked an increase of pressure equal to 0.17 centimeters, M. Preterre, the well-known dentist, applied the apparatus which he is in the habit of using. There was a sudden cessation of breathing, which lasted about fifteen seconds. Then a long inspiration followed, and after ten seconds there was complete insensibility. Dr. Labbé now proceeded quietly and leisurely with the operation, followed by the dressing. All this took about eight minutes, during which time the patient slept quietly, with a regular pulse, and a clear, rosy complexion. On waking up she immediately felt the pain, and had a sort of short, hysterical fit, with crying. But she declared when it ended that she felt quite well and very hungry, as she had not had anything yet to eat. The assistants were struck with the way in which she recovered her normal condition, as she was able to walk immediately, and to resume her habits. The value of this anæsthetic mixture of about eighty-five parts of nitrous oxide and fifteen of oxygen, administered under tension, and discovered by Prof. Bert, therefore promise to be very useful and practical. With this mixture, employed in compressed air, the patient does not get blue in the face, and the natural complexion, pulse, and breathing seem to be preserved. Moreover, it is not preceded by the period of agitation which often proves so tedious and troublesome, and is not followed by the stage of reaction which often upsets a patient for several consecutive hours.—*Med. and Surg. Reporter.*

THE EXCISION OF HARD CHANCRES.—Dr. Auspitz, of the Vienna Polyklinik, has given the results of his experiments on the excision of hard chancres. Of thirty-four cases operated upon, thirty-two remained under observation; and of these thirty-two eighteen healed without any hardness, and the remaining fourteen healed with hard bases. In three of the thirty-two cases roseola and other general symptoms were present before the operation; two other cases did not remain long enough under observation, and four others exhibited a dubious result. Of the remaining twenty-three there were fourteen which healed without any hardness, and no constitutional symptoms were exhibited up to the time of last observation; the period of observation varied from four months to twenty. Of the nine cases in which hard bases were left, two showed very slight constitutional symptoms, while the rest showed well-marked constitutional symptoms. Less fully carried out experiments have also been made by Dr. Unna and Dr. Kölliker, and these have shown similar results.—*Medical and Surgical Reporter.*

TREATMENT OF FOREIGN BODIES IN THE EAR.—"Gant's Surgery," recenty issued in England, lays down the following rules to be observed in cases of foreign bodies in the external meatus of the ear: 1. Be sure that the foreign body is seen. To attempt to extract a foreign body without first seeing it is highly dangerous. 2. Determine what the body is, and, if possible, obtain a sample of the body supposed to be in the ear. 3. Remember that a body which will not swell, and has no cutting edge, will generally remain without causing any urgent symptoms. 4. Seeing the body, determine with a probe if it be movable. If easily movable, concussion with a downward position of ear will often remove it. 5. Warm water injection is the best of all methods of removing foreign bodies. 6. If it be a vegetable substance, do not inject fluid unless you have time to extract the body either at one operation, or shortly afterward. 7. Injection failing, which is very exceptional, a surgeon, with the necessary appliances, ought to be at once consulted, or should

urgent symptoms arise from the irritation in the attempted extraction, the extraction by incisions, galvano cautery, boring out by trephine or conical file the center of substance, and so causing its collapse; or even detachment of the auricle may be necessary.—*Pacific Med. and Surg. Journal.*

SHAKESPEARE AND THE CIRCULATION OF THE BLOOD.—I wonder, with all due respect to the memory of Harvey, whether that illustrious physician had studied Shakspeare deeply; for in Act III., scene 2, of the Second Part of Henry VI., Lord Warwick, upon beholding the body of Duke Humphrey, of Gloster, displays a most marvelous knowledge of the heart's action:

"See, how the blood is settled in his face!
Oft have I seen a timely-parted ghost,
Of ashy semblance, meagre, pale, and bloodless,
Being all descended to the laboring heart;
Who, in the conflict that it holds with death,
Attracts the same for aidance 'gainst the enemy;
Which with the heart there cools, and ne'er returneth
To blush and beautfiy the cheek again.
But see his face is black and full of blood," etc.

"I can not but stop a moment to observe," says Dr. Johnson, "that this terrible description is scarcely the work of any pen but Shakespeare's." William Harvey was born, I think, at Folkestone in 1578, published his work on "The Circulation of the Blood" in 1628, and was head physician to Charles I. in 1632. William Shakespeare was born at Stratford-on-Avon, Warwickshire, in 1564, and died in 1616. I find also in Vol. I. of Grey's Notes on Shakespeare, p. 288, a few lines from Echard's History of England, Vol. I, p. 89:

"If this same were a churchyard where we stand,
And thou possessed with a thousand wrongs;
Or if that surly spirit, melancholy,
Had baked thy blood, and made it heavy, thick,
Which else runs tickling up and down thy veins."

Grey says Shakespeare wrote this some time before the discovery of the circulation of the blood by the celebrated Dr. Harvey, which was about the year 1628. Had he lived till that time he would have expressed his meaning with more propriety.—COSMO LOGIE, M.D., in *London Lancet.*

LEAD COLIC.—A recent event has caused great excitement in Botignoiles, a quarter of Paris. A physician was called to attend some sixty individuals of this quarter suffering from lead colic. On investigation the bread eaten proved to be the cause of the epidemic, for the high price of fuel had forced several bakers to burn wood obtained from demolished buildings, much of which wood was covered with white lead. —*Paris Medical.*

MEDICAL NEWS.

"Nulla dies sine linea."

BAUMGARTEN (*Centralbl. f. die Med. Wissenschaft.*, March 30, 1878) has already drawn attention to the constant presence of a granulation tissue, containing epithelioid and giant cells, around ligatures placed on vessels, but he could not recognize nodules analogous to those of tubercle. More recently, he has observed around foreign bodies, such as bits of hair, cotton fibres, and the dust which settles in all operative wounds, true tubercular giant cells; there is the same typical disposition of the muclei at the periphery, the same protoplasm with its dark granules; the cells are sometimes isolated, sometimes surrounded by round or oval collection of lymphoid cells, often surrounded by a reticulum; no vessel could be recognized. No distinction could be drawn between their appearances and those of tubercle, but the growth showed no tendency to caseation or dissemination.—*London Medical Record.*———Dr. Lubimow states (Virchow's *Archiv*) as the result of his investigations, that giant-cells are in dependent formations, like other cells, and develop out of a cell by increase of its protoplasm, and multiplication of its nuclei. This origin is, first, in tubercular peritonitis and tubercular lymphatic glands inside the lymph vessels, and more precisely in their proliferating endothelium. Secondly, in tuberculosis of the testis and in organs composed of connective tissue and gland tubules, they originate in the epithelial cells of these tubules on the one hand, and in the connective tissue corpuscles or the endothelium of their walls on the other.—*London Medical Record.*———As an offshoot of Listerism, air which has been passed through liquid carbolic

acid is recommended by Prof. Sneller, of Utrecht, as a substitute for the carbolic spray. The method suggests itself as a good one. The object of Lister's method is to destroy the bacteria, but the acid employed for this purpose is itself a foreign matter, and, as such, must irritate to a greater or less degree. The carbolized air has the advantage of purity, and is, at the same time, free from objections to the spray. In practice, the air has been found to diminish the bleeding from a cut surface, while the spray encourages bleeding by the moisture it maintains.—*Michigan Medical News.*———The commencement exercises of the Kentucky School of Medicine took place at Library Hall, Thursday evening, June 26. The programme was excellent, and the whole performance a complete success. The speeches and the music were unusually attractive, and quite a large audience was present to honor the occasion. There were forty-two graduates.——— At the fifty-first meeting of German Naturalists, in Cassel, Dr. Wiedemeister made some remarks on the connection between heart disease and mental diseases. Practitioners who are not exclusively psychologists are much inclined to consider cardiac affections as one of the causes of madness, while psychologists are of a totally different opinion. If his memory did not fail him, Bazin had found, in making *post mortem* examination of lunatics, that in one per cent. of the cases there was disease of the heart. Witkowsky had found this in more than seven per cent., and Karrer, of Erlangen, in thirty per cent. Wishing to find some more definite numbers, he had for some years past carefully measured the hearts of lunatics, especially the left ventricle, and had found that in 75 per cent. of the cases there was thickening of the wall of the left ventricle, and that the latter was hypertrophic.—*British Medical Journal.*———Dr. Luton, of Rheims, states that the tincture of iodine in distilled cherry-laurel water is a far more efficacious and innocuous means of treatment than the nitrate of silver. One gramme of the tincture may be added to twenty grammes of the water of medium strength (20°) and produces a collyrium the color of pale brandy. Some of this should be dropped into the eye four or five

times a day, external lotions being also abundantly employed. It has proved rapidly successful at the Hotel Dieu of Rheimy.—*Revue Med.*———Dr. Caro read a paper in which was reported several cases in which he had noted microscopical and chemical differences in the milk from the right and from the left breast of the same person. In all his cases the milk from the right contained a very much greater amount of nutritive material than that from the left breast. On motion the paper was referred to the academy, and the section adjourned to discuss nutrition from another standpoint.—*Med. Record.*———Even the homœopaths have their little differences. Up to a few months ago the learned faculty of that ilk in Louisville sold their advice and gave away their medicines. But then there came another pundit to town, opened a "homœopathic pharmacy," and sold his medicines and gave away his advice. Now the question arises, Which side trades in the most infinitesimal?—*Louisville Med. News.*———Dr. George Sigerson has been making a number of experiments upon animals in whom artificial cutaneous anæsthesis had been produced. He finds that effects similar to those obtained by Charcot can be brought about by the employment of metallic disks, etc.—*British Med. Journal.*———A writer in the *British Medical Journal* recommends for sweating hands or feet the painting of the surface affected, with the tincture of belladanna. An ointment of the same could also be offered with advantage in certain cases. In case of the hands, a "bracelet" painting of the tincture about the wrist has proven successful.—*Cincinnati Lancet and Clinic.*———Mr. Richard Grant White asserts, as the result of wide observation at theaters, festivals, churches, and railway stations, that "English men and women are generally smaller and less robust than ours, and, above all, that the women are, on the whole, spare and less blooming than ours."—*Medical Times.*———Dr. Tilbury Fox left a written request that it should be reported of him in any obituary notice which might appear in *The Lancet*: "I die a Christian in the now, I fear, much despised sense of that term, a 'simple believer in Jesus Christ as a personal living and loving

Saviour," without any righteousness of my own, but perfect and secure in His; and that 'I know in whom I have believed, and am persuaded that He is able to keep that which I have committed to Him until that day.'"—*London Lancet.*

———In a report made by the Department of Agriculture of the Italian Government, it is stated that borax used instead of salt in preserving butter imparts to the butter no flavor whatever, while it is entirely innocuous. Samples of fresh butter, in which much of the buttermilk was purposely left, have retained their natural fine flavor without change for three months after having been salted with borax.—*Popular Science Monthly.*———Dr. Sawyer records his testimony in favor of the efficacy of the ointment of oleate of zinc in the treatment of eczema. He has used the remedy for nearly six months in a large number of cases arising in hospital and private practice. The author has always used the oleate of zinc made into an ointment, either with vaselin or with lard. The preparation with vaselin he has employed in private practice, and that with lard on account of its comparative cheapness, for the hospital patients. Vaselin is preferable to lard, because it is not so liable to change, and because the greasiness of the lard injures the clothes of the patient, and sometimes disagrees with the skin. The ointment made with vaselin may be rendered more "elegant" by the addition of one drop of otto of roses to each ounce. The oleate of zinc ointment is also said to be serviceable in the treatment of eczema, and more particularly of eczema capitis of children.———Dr. James L. Little, formerly of the College of Physicians and Surgeons in this city, also Professor of Surgery in the University of Vermont, has been appointed Clinical Professor of Surgery, vice Dr. Joseph W. Howe, resigned.—*Clinical Record.*———The consumption of beer in Paris has assumed such large proportions that its home manufacture is quite insufficient, and has to be supplied by foreign beers, which are incontestibly superior. The total annual consumption exceeds one hundred million litres.—*Med. and Surg. Reporter.*———Dr. Brouardel has been elected to the chair of Forensic Medicine in the Paris

Faculty in place of the late Dr. Tardieu.—*Med. and Surg. Reporter.*———The will of Dr. Charles Murchison has been proved under £50,000. — *Lancet.* ——— EXPERIMENTS IN OPIUM-SMOKING.—The Russian traveler, Dr. Miclucho Maclay, while recently on a visit to Hong-Kong, experimented on the effects upon himself of smoking opium. The experiment was made at the Chinese Club, and was under the direction of Dr. Clouth, who made the following notes: Mr. Maclay was in normal health, and had fasted eighteen hours before commencing the experiment. He had never smoked tobacco. Twenty-seven pipes, equivalent to 107 grains of the opium used by the Chinese, were smoked in two and three quarter hours at tolerably regular intervals. The third removed the feeling of langor caused by his long fast, and his pulse rose from 72 to 80. The fourth and fifth caused slight heaviness and desire for sleep, but there was no hesi tation in giving correct replies to questions, though he could not guide himself about the room. After the seventh pipe the pulse fell to 70. The twelfth pipe was followed by singing in the ears, and after the thirteenth he laughed heartily, though without any cause that he can remember. Questions asked at this time were answered only after a pause, and not always correctly. He had for some time ceased to be conscious of his actions. After the twenty-fifth pipe, questions asked in a loud tone were not answered. After the last pipe had been smoked, he remarked, "I do not hear well." Forty minutes later there was a slight return of conciousness, and he said, "I am quite bewildered. May I smoke some more? Is the man with the pipe gone already?" Fifteen minutes later he was able to go home, and then retired to bed. He woke the next morning at 3 A. M. and took a hearty meal, after his fast of thirty-three hours. During the next day he felt as if he had bees in a great hollow in his head, as well as a slight headache. The organs of locomotion were first affected, next came sight and hearing, but Mr. Maclay is positive that there were no dreams, hallucinations, or visions of any sort whatever.—*Popular Science Monthly.*

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XXVIII.] AUGUST, 1879. [No. 2.

ORIGINAL COMMUNICATIONS.

"Qui Docet Discit."

ART. I. *Remarks on Digitalis.*—By WALTER COLES, M. D., Saint Louis, Mo.

The popular proverb that "doctors will differ," is unfortunately too true. It is also true that physicians not unfrequently differ concerning matters wherein they should agree. So long as we are confined to the domain of mere theory, it is, perhaps, well that there are differences, since they lead to such discussion and research as is best calculated to elucidate what is doubtful, and to the discardal of that which is false. Hence, when there is unanimity in the acceptance of a fallacy, its correction is necessarily long deferred, and frequently accompanied with stout opposition. This has been eminently the case with reference to the physiological and therapeutic action of digitalis—a drug which, although long since well known and employed in medicine, seems just beginning to assert its true place in therapeutics. Indeed it is a little remarkable, when we reflect upon the prominence which has been accorded this drug by former writers on therapeutics and materia medica, that its real character should be involved in so much uncertainty and error. When, however, we recall the opinions so confidently expressed by those great and acute clinical observers, to whom we are wont to revert as the source of our earliest professional precepts, there should be no wonder that we are slow in relinquishing early impressions, or in substituting others quite the reverse.

The old view, so generally held, that digitalis is an "acro-narcotic poison," possessing deadly sedative properties, has been apparently so fully and conclusively overthrown by recent physiological investigations, as well as by the clinical observations of nearly all modern writers on therapeutics, that it would seem scarcely necessary to argue the question further. Nor do we hope to advance ideas on the subject which have not been more forcibly and better expressed by others; yet we trust that a few words on this important and interesting subject may not prove wholly unprofitable. We are prompted the more to do this for the reason that we are satisfied that a large proportion of the profession, into whose hands a medical journal falls, still adhere to the teachings of their text-books on this and kindred subjects. The busy practitioner has no time to keep pace with every experiment and discoveryin all the minutiæ of physiology and pathology; nor can he be expected to read all the practical works founded on these researches, with which a fruitful press is ever teeming. The old ante-bellum stand-bys, Wood, Watson, Dickson, Dunglison, Headland and others of like prominence and authority, are still upon the library shelf, within easy reach in all cases of emergency, while many newer and later works but repeat the former teachings in regard to many points of pathology and the methods of relief.

It has been the experience of the writer, and, we doubt not, of others, that frequently in consultations no little embarrassment has arisen over a difference of views in regard to the indications for digitalis. If, guided by our own clinical experience, as well as by the clear demonstration of recent experimenters, we venture to suggest this article as an efficient cardiac stimulant, we are met either by a look of surprise, or a dubious shake of the head, clearly indicating that the attendant entertains no such conviction touching the action of the means proposed. A difference of views, under such circumstances, is exceedingly unfortunate for all parties concerned. From the very nature of things, the question most frequently arises in the face of extreme danger, and when there is no time to be lost in the generally fruitless discussion

of a theoretical point. If, in deference to the prejudice of a professional brother, you waive the administration of the digitalis, you can but feel that you have abandoned a most effective weapon; while, on the other hand, should he yield a reluctant assent, you are haunted by a disagreeable consciousness that his concurrence is by no means cordial—thus entailing upon the consultant an unenviable responsibility.

We think that the time has come when physicians have no good grounds for difference of opinion as to whether digitalis, in proper doses, is a cardiac depressant or the reverse. Whatever views may with propriety be entertained as to its exhibition in any particular case, there should be no question touching its value in certain classes of cases, or, in other words, as to the general principles governing its action. The fact that digitalis exerts a stimulant tonic action upon the muscular fibres of the heart and vascular system generally, has been so clearly and overwhelmingly demonstrated of late years by the concurrent testimony of so many disconnected observers, that it may now be regarded as a fact, concerning which, we repeat, there should be no dispute: and he who still clings to the ancient views in this matter must be either obstinate, or else unfortunate in neglecting to inform himself of the facts within reach. We say this with the greatest deference and respect for a large and highly respectable class of practitioners, who have made few or no additions to their libraries within ten years—for it is within that time that the most valuable acquisitions to our knowledge concerning this drug have been made; and, indeed, the same remark is equally applicable to many other familiar agents.

In this connection it is well worth our while to glance briefly at the therapeutic history of digitalis, comparing the views formerly held in regard to its physiological action with those entertained by the leading authorities of to-day.

In order to do this it is not necessary to go back far. If we examine that valuable standard work, the United States Dispensatory, edited by Drs. Wood and Bache—a book which is probably consulted more frequently, and with more

confidence, than any other in the hands of the physician—we find but a repetition of the same views which have been generally taught, both in works on materia medica and in the lecture-room, for more than a century past. In the thirteenth edition (1876), although "carefully revised," we read that "digitalis is narcotic, sedative and diuretic;" that it exercises "a remarkably sedative action upon the heart," as "exhibited in the reduction both of the force and frequency of the pulse." We are also cautioned that it is exceedingly dangerous and treacherous in its action—frequently betraying little or no effect for several days, when suddenly, by a sort of explosion of "cumulative" force, its stored-up power is liberated, to the great prostration or utter destruction of the patient.

The foregoing is about the sum and substance of what nearly every student of medicine was taught up to ten or fifteen years ago. With such impressions, it is, indeed, not strange that the young practitoner should handle this substance with somewhat the same feelings that he would a can of nitro-glycerine; and he will be certain to prescribe it as seldom as possible, and never without the most painful misgivings. Moreover, if in a lew exceptional cases he follow his early teachings, he will employ it only when a powerful depressant of the circulation is demanded, and, the effect being just the opposite to that intended, the patient either fails to improve, or perhaps barely escapes with his life. Under such haphazard and erroneous practice, is it remarkable that digitalis should have gained the reputation of being uncertain and sometimes even dangerous in its actions?

As Fothergill* has remarked, "the history of digitalis as a therapeutic agent is most instructive, and represents the pathological opinions of the time." When nearly all inflammatory diseases were treated on a vigorous antiphlogistic plan, and after a copious blood-letting, digitalis quieted a heart rapid from mere exhaustion, it was called a sedative; whereas the reduction in frequency of the pulse only indicated that the heart, through the influence of the digitalis,

*Antagonism of Medicines, p. 91.

contracted more efficiently, and hence was enabled to do its work in fewer beats. Thus through the whole catalogue of ailments for which this article was prescribed we find its effects, either for good or evil, explained in such a way as to comport with the theories then in vogue. Even those who appear to have caught glimpses of the truth—and of these there were several of prominence—were, for the most part, quietly ignored, until finally, thanks to the teachings of experimental physiology, these points were subjected to a crucial test, and the question thus rested upon a firm demonstrable footing, fully vindicating those accurate and bold observers who, while still groping in the dark, were, nevertheless, unwilling to accept unqualifiedly the empirical views generally entertained. For example, as far back as 1800, Dr. John Moore, according to Beck*, proved to his own satisfaction that digitalis acted primarily as a stimulant rather than as a sedative to the circulation, and that it was only when given in large doses, or after a certain lapse of time, that it proved sedative. This latter proposition, however, as we shall presently see, admits of a clearer explanation not incompatible with the former. Dr. Beck himself was evidently in advance of his cotemporaries on this subject, for in his most excellent and practical work he virtually excludes digitalis from the class of sedatives and dismisses it by declaring that "digitalis is not a substitute for venesection in inflammatory affections. It is often a useful, sometimes an abused adjuvant, but never a proper substitute."

It was not, however, until twenty years since that the action of digitalis began to be explained in a rational manner; when, through the observations of Handfield Jones, Fuller, Traube, Fothergill, Wilks, Stillé and others, a complete revolution was wrought in its physiological and clinical relations. The facts thus established, together with a more perfect understanding of the physiological functions of the various nerve centers regulating the action of the heart and blood-vessels, places not only digitalis but various other drugs in an entirely new light, which the elaborate researches of

* Lectures on Materia Medica and Therapeutics. Second Edition.

Lander Brunton, Fraser and others enable us to intelligently analyze and utilize to an almost limitless extent.

Formerly the characteristics which made up the clinical elements of the "pulse" were of the simplest and crudest nature, especially in a physiological point of view, and however cultivated the finger that pressed it, the deductions drawn from its examination were necessarily liable to fallacy. This, together with the pathological dogmas of the day, led directly to the blindest empiricism. Now, however, that we have gained an insight into the complex mechanism of the circulation; now that we know that there are various nerves supplying the heart and its tributaries capable of independent and even of opposing function; that the excitation of one set of fibres will quicken the heart, another will retard it, while still another will render it irregular in its rhythm; that one will produce fatal syncope in tetanoid systole, another producing the same result from diastolic paralysis; that similar agencies preside over the calibre—the contraction or dilatation even of the minutest capillaries—to say nothing of the chemico-vital changes in the structure of the heart and blood-vessels; of the blood itself, or of the tissues through which it courses—all entering into and modifying the pulse —we are enabled to view certain vascular phenomena from a standpoint far in advance of those who have gone before us.

With these physiological data as a basis of investigation, many experiments of great practical value have been instituted upon the lower animals, tending to demonstrate with mathematical certainty—what before was merely guessed at—that there are agents capable of acting specifically upon certain nerve-centers, that each possesses properties more or less peculiar to itself and frequently in direct antagonism to each other.

Armed with such knowledge, clinical deductions are easily drawn, and many of our therapeutic resources rescued from the thraldom of a blind empiricism. It is to be regretted that vivisection is now prohibited by law in Great Britain, since a fruitful source of medical progress is thus cut off in a country which has been most prominent in the practical util-

ization of experimental physiology—a branch of knowledge which promises a rich harvest for the rational therapeutist. The light which has thus been shed upon the medical action of digitalis is only one of many illustrations of this fact. Instead of being a sedative weakening the heart and lowering the blood-pressure, as has been generally taught, it is now ascertained to produce just the opposite effect, and hence is most efficient in those conditions where it was formerly considered contra-indicated. This is, indeed, remarkable, but it is nevertheless a fact which has been abundantly confirmed, not only in the laboratory but in the sick-room.

All of us who have attained middle life can remember when digitalis was scarcely ever prescribed, unless for organic heart disease or dropsical effusions. In the former case it was administered with little or no reference to the character of the lesion, and in the latter as a diuretic on general principles. Sometimes it acted like a charm; sometimes no effect was produced; at other times it aggravated the symptoms. Thus, fired off in the dark, digitalis quite naturally acquired the reputation of being an exceedingly uncertain and, as Hope expresses it, "confusing" remedy. If, however, the foregoing propositions are true—if digitalis does really act as a stimulant or tonic upon the central organ of circulation—we can readily understand how it may be rendered useful as an aid to a crippled heart under certain circumstances, and, also, why it should be employed with extreme caution, or not all, under others.

After what has been said, it is unnecessary to go into details as to the indications or contra-indications for digitalis in organic cardiac affections. In all such cases it is of the utmost importance that the practitioner should first define in his own mind as clearly as possible the precise nature of the difficulty, bearing in mind that a simple hypertrophy, or the existence of a valvular murmur, is by no mean necessarily an occasion for therapeutic interference, nor does it follow that digitalis is applicable; on the contrary, it may do harm. Remembering, too, the pre-stated physiological action of digitalis, and, also, the fundamental fact that nature always at-

tempts to remedy any injury done to the valves of the heart by certain conservative and compensatory changes in its structure, we have an intelligent guide to treatment.

Through digitalis we can enable the heart to overcome a moderate stenosis, or obviate the chain of evils resulting from insufficiency; indeed, it is possible in certain cases, for a time at least, to entirely relieve a leaky valve, for it is certain that dilatation may of itself render valves incompetent which are otherwise healthy.

Speaking generally, dilatation, or dilatation with hypertrophy, are conditions which are nearly always markedly benefited by digitalis. In such cases it not only tends to retard further increase of these changes, but, according to Fothergill*, it indirectly improves the nutrition of the organ. This author holds, with B. Foster, that the effect of digitalis is to strengthen the systole while it lengthens the diastole. He says: "Digitalis excites more perfect ventricular contraction, the arteries are better filled with blood, and consequently the heart itself is better nourished; while the brief diastolic sleep is lengthened. Between the longer rest and the improved nutrition the heart is enabled to grow and to increase in power."

In hypertrophy without dilatation, or in fatty degeneration with evidences of more or less general atheroma, we should be exceedingly cautious how we recommed digitalis, for obvious reasons.

In all the secondary general effects of valvular disease digitalis is most useful, and should be given whenever the heart itself will admit of it. Under such circumstances dropsies quickly subside, and dyspnœa, the result of pulmonary congestion, disappears or is kept in abeyance. This is accomplished in part by the action of the drug on the heart, and also on the coats of the blood-vessels. Of course, in a majority of these sad cases we are battling simply for a prolonged existence and comparative comfort—this is the most that we can expect. It is, however, remarable how patients can sometimes be kept up whose hearts are appallingly de-

* Ibid., page 76.

fective. This is well illustrated in the case of the late Dr. Edgar*, a well-known physician of Saint Louis. This gentleman died last year at the age of sixty, having been affected with valvular disease of the heart since he was fourteen. When a young man his heart was examined, and he was informed that he could survive only a short time. Yet he lived on for twenty-five years, engaged in the daily practice of his profession. He suffered at all times with more or less dyspnœa. The post-mortem appearance of the heart was most remarkable; all of its cavities were immensely dilated, and contained, by actual measurement, sixty ounces of blood; all of the cardiac openings, with the exception of the aortic, were extremely patulous. The right auriculo-ventricular orifice admitted the passage of four fingers, and measured 7½ inches in circumference; the mouth of the pulmonary artery admitted four fingers and was dilated upward into the lungs; each branch admitted three fingers. The pulmonary veins were three or four times their normal calibre. The left auriculo-ventricular opening admitted three fingers easily. The *foramen ovale* was also found sufficiently open to admit four fingers, and measured 7½ inches in circumference. It seems truly wonderful how any man could possess such a heart and such extreme dilatation of the pulmonary vessels and yet be able to live an hour. Yet this condition of things had probably existed for many years, and the writer has frequently been informed by Dr. Edgar himself that he attributed the prolongation of his life, in comparative comfort, to the use of digitalis, which he always carried with him, frequently taking a dose while on his daily round of visits.

Over a century ago Dr. Withering recorded the fact that digitalis acted best as a diuretic in certain asthenic forms of dropsy. Says he: "It seldom succeeds in men of great natural strength, of tense fibres, of warm skin, of florid complexion, or in those with a tight or cordy pulse. On the

* Dr. Edgar's heart and a history of his case were presented to the Saint Louis Medical Society in September last. See Society Proceedings, p. 164, appended to *St. Louis Medical and Surgical Journal*, November, 1878.

contrary, if the pulse be feeble or intermitting, the countenance pale, the lips livid, the skin cold, the swollen belly soft and fluctuating, or the anasarcous limbs readily pitting under the pressure of the finger, we may expect the diuretic effect to follow in a kindly manner." There can be no doubt that a correct principle was here enunciated, yet such was the dominance of theory that Dr. Withering's observations bore little practical fruit. But in the light of our present knowledge we not only understand how digitalis may rid the system of dropsical effusions in certain cases "associated with an enfeebled state of the constitution," but we also see how it can do this and at the same time be slightly, if at all, diuretic in the technical or true physiological sense of the term —its effect upon the kidneys being secondary and incidental to its stimulant influence upon the heart and blood-vessels. "It fills the arteries," says Dr. Fothergill, "and in doing so empties the veins." As Traube has pointed out, "the bulk of urine is the measure of blood-pressure on the renal glomeruli; and this usually is in direct proportion to the general blood-pressure."

Many of the older writers lauded foxglove in epilepsy, and, doubtless, from the responsible names that have attested its virtue, their testimony was well founded. Here is another instance where the observed action of digitalis was erroneously construed in consonance with prevailing theories. For this was a time when large venesections were fashionable in the therapeutics of epilepsy, under the assumption that the convulsion seizures were dependent upon congestion of the brain; whereas, we now know that this affection is more frequently associated with an anæmic state of that organ, and the digitalis relieves this conditon by increasing the blood-pressure and equalizing the cerebral circulation.

The treatment of hæmorrhage by internal medication, in which sedatives bore a conspicuous part, was formerly the practice in conjunction with the lancet, which many of our readers will remember was frequently brought into requisition in such crises, as a powerful method of taking away the *vis a tergo*. Happily we now have at our command agen-

cies more efficient as true physiological hæmostatics, and far more economical of the vital powers of the patient. Ergot is, perhaps, the best known of these. Though not identical or so speedy in its action as ergot, digitalis in full doses has proven exceedingly valuable in hæmoptysis, epistaxis, menorrhagia, uterine hæmorrhage*, etc., and is a remedy which is probably destined to become more popular as a hæmostatic; not in the sense in which it was formerly employed, but by virtue of its slowing the heart and at the same time inducing contraction of the bleeding vessels.

We have thus mentioned certain affections somewhat in detail, with the view of more particularly illustrating the stimulant power of digitalis on the nerve centers supplying the heart and blood-vessels—though its usefulness in many other diseases might, on similar grounds, be very much extended. In capillary bronchitis, pneumonia, in certain forms of phthisis, nephritis, especially in the renal complications associated with the exanthemata—all know, from considerable experience, that digitalis is frequently of the greatest service. In pneumonia its effect is often magical upon the laboring heart: steadying and strengthening the flagging pulse, and relieving the respiration. It is well in such cases to combine it with quinine. Niemeyer recommends quinine in combination witn the celebrated "Heine's pill," the chief ingredient of which is digitalis. In many of the lower grades of pneumonia, or in tuberculosis of the lung complicated with circumscribed areas of inflammation, by the judicious use of digitalis we can frequently bridge our patient over a crisis without the necessity of pressing alcoholic stimulants to an extent doubtless frequently hurtful, in cases of impaired aëration.

In various nervous affections other than epilepsy, already mentioned, digitalis has been clinically tested, and with the most satisfactory results. Its wonderful efficacy in delirium

* The writer has found a solution of atropine, hypodermically injected, of signal benefit in several extreme cases of post-partum flooding; the effect being to rally the patient from an almost moribund state, and by stimulating the ganglionic centers, producing efficient uterine contraction.

tremens, in from ℥i to ℥i doses, has long been known, and as it acted best on the weakest patients, was for a time the source of much surprise and discussion among physicians of the old school. Bartholow states that the congestive form of hemicrania may not unfrequently be permanently relieved by the use of digitaline granules (one-sixtieth of a grain twice daily). He also quotes Dr. Williams, of Hayward's Heath Asylum, in favor of its use in both acute and chronic mania. Dr. Williams states that the average effective dose is from ℥ss to ℥i of the tincture, which "may certainly be given with impunity for several days, and subsequently—adjusted to the state of the pulse—may be advantageously used for several months." Dr. W. further concludes "that the weakness of the circulation is no indication against its employment; on the contrary, experience shows that the most enfeebled subjects bear its administration as well as the most robust."

Writers are not yet fully agreed as to the indicatians for digitalis in pyrexia. But that it does possess the power of lowering the temperature in fever, after it has commenced to tell upon the circulation, is conceded by most late authorties. In typhoid fever Liebermeister usually gives from eleven to twenty-two grains in the course of thirty-six hours, though both he and Ackermann advise close watchfulness in such cases, since in fever the heart through its nervous supply is sometimes unduly sensitive to this class of stimulants; and thus the effect of digitalis, so highly prized in heart disease, may become a source of danger.

Enough has been said, without touching upon many other affections in which digitalis may be employed with decided advantage, to illustrate the general principles underlying its utility as a therapeutic agent—which is the object of this hastily written and very imperfect paper. Physiological experiments having "blazed the way," it remains for clinical observation to construct the beaten path and take note of real dangers to be avoided by the general practitioner. Ample evidence has been accumulated, however, to warrant the assertion that in digitalis we have an efficient and potent

stimulant of the nerve centers presiding over the circulation, in at least all cases where the tissues of the heart and arteries are sufficiently sound to stand a marked increase of blood-pressure. Its so-called "cumulative" properties, so much dwelt upon by all the older writers and still a bug-bear in the minds of many, seems to rest on no well-founded physiological or clinical facts. Doubtless, some of the rare accidents formerly attributed to it were due to the fact that under erroneous theories it was administered in the very cases where it was least tolerated or required. True, when the system is once under the influence of digitalis, its effects, like those of belladonna, continue longer than is the case with many other drugs; hence it is possible to produce a cumulative result by causing the influence of one dose to lap over that of the next—but only in this way. This phenomenon of "cumulation," thus produced is by no means peculiar to digitalis; it is frequently illustrated on the street when individuals are seen intoxicated, from the simple fact that they have not allowed a prudent interval to elapse "between drinks."

ART. II. *Treatment of Abscess of the Liver by Drainage.* By F. PASCHAL, M. D., Chihuahua, Mexico.

The importance and fatality of abscess of the liver is so great that many methods have been employed in their treatment, and much written by the different advocates of each method. Indeed, it is not strange that no fixed plan should be agreed upon, when circumstances may render it necessary to resort to different procedures, especially when we consider the great mortality attending them when left to take their course unassisted by the efforts of surgery. So great an authority as Aitken says: "A simple puncture is only warrantable when the pus has already penetrated through the superficial layer of the abdominal aponeurosis, or intercostal muscles." This he teaches when from 10 to 30 per cent. of the cases, when left to themselves, rupture into the lungs, in about the same proportion through into the peritoneum, the stomach, or some part of the intestinal tract, and in the minority through the external integuments. Those rupturing

into the peritoneum and stomach generally prove fatal, and those into the intestinal tract being more favorable, those through the external integuments, tedious, annoying, and a source of general discomfort to the patient and very often ending in death.

In view of these facts, I think is justifiable to evacuate the pus as soon as we are satisfied that it exists, and in these as well as other cases of abscess, when it is justifiable to operate, as free an exit should be given to the pus as is consistent with the safety of the patient, and means resorted to to prevent the reaccumulation. Therefore, I think that the two cases which I will mention will allow me to assert that in those cases where the pus can be reached through the intercostal spaces or at a point where the peritoneum will not be involved, that the proper plan of treatment is to puncture the abscess and introduce a drainage tube, and I think that in a majority of cases the pus can be reached through the intercostal spaces.

The great objection that many physicians have, and the objections they raise against puncture and drainage, is to the entrance of air into the cavity and consequent danger of septicæmia, and often gangrene. But the entrance of air can be so thoroughly prevented by the method I will hereafter mention, that these objections need not deter one from operating, and as the operation is simple and is not attended with any more, if as much, danger, as repeated aspiration, it should be preferred. I will now mention briefly the cases upon which I have based my assertions.

Case I.—A man, laborer, aged 33; tall, well nourished and of splendid physique. He was first taken ill in November, 1878, and in February, 1879, I was called to see him. His pulse was 110 and strong; no jaundice; appetite good; no diarrhœa; pain over right infra-axillary region and right hypochondriac; dullness extended as high as the third rib, and two inches below the border of the false ribs. Respiration was greatly interfered with, on account of pressure on the lungs and diaphragm; cough almost constant; the intercostal spaces were dilated, and pain was experienced on

pressure, but no fluctuation could be detected. I diagnosed abscess of the liver, introduced an exploring trocar and drew off a few drops of white, inoffensive pus. I then introduced a large trocar and drew off four pints of the same character of pus, greatly to the relief of the patient, and before it had ceased to flow through the canula I introduced a fenestrated No. 7 gum catheter to the depth of 7 inches into the cavity and attached a piece of gum tubing, the end of which I immersed in a pan of carbolized water placed by the patient's bed. The pus flowed through the tube and remained at the bottom of the pan, and one could see the amount of discharge from visit to visit. The water was renewed frequently, care being taken to have the end of the tubing compressed while out of the water. Lymph soon sealed the external opening around the wound, so that it was impossible for even the smallest quantity of air to enter the cavity. The tube remained 23 days in the cavity, and during that time there was not a particle of odor that could be perceived. The patient made a good recovery and is still doing well.

Case II.—Was a laborer, man, aged 23, small stature, and badly nourished. He was taken sick with fever in October, 1878, and in March, 1879, I was called to see him. I found him sitting up in bed resting his head on his knees; he was emaciated to the greatest degree; he had passed his days and nights as I have mentioned for two months. His lower extremities were greatly œdematous, and he was at the time suffering acute pain over the epigastric and hypochondriac regions. He had a distressing cough, and every line of his face showed acute suffering. There was no jaundice or diarrhœa, and his appetite was good. The right hypochondriac region was greatly bulged and deep fluctuation could be detected; indeed, the bulging was so perceptible that it required little examination to diagnose the case correctly. His general condition was so bad that I hesitated about advising a puncture, for fear that he could not stand the shock. But he consented and I punctured the abscess through the ninth intercostal space and drew off 12 pints of dark, offensive, grumous pus, much to his relief, as he could immediately lie on pillows. I

then introduced a No. 7 catheter and attached the tubing as before, but this time used no carbolic acid. The discharge continued and became white, and without the least odor being perceptible. He continued to improve, and at the end of 33 (thirty-three) days, there being no discharge, I removed the tube and discharged him. The opening closed and I found perfect flatness over an enormous space which, after the operation, was resonant. I often meet him on the street and he looks fat and apparently well. It seems almost incredible that so large an amount of fetid pus could be removed and recovery take place, and I am satisfied that drainage was the means of saving his life.

I claim nothing original but the emersion of the tube in water, and even this may not be original, though I have not seen it mentioned in my reading. Not only in abscess of the liver, but in other cases that require drainage, I think that this simple plan ought to be adopted, as it is certainly far more agreeable to patient and attendants to have the discharge collected where no flies will swarm, and where the most fetid pus can be rendered odorless; but aside from this, it is utterly impossible for atmospheric germs to get into a cavity properly treated by the method mentioned, and if, as claimed, that decomposition can not take place if these are excluded, it holds to reason that our practice should be to prevent their entrance.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I. *Classification and Investigation of Malignant Intermittent Fevers.*

The forms of malignant intermittent fevers are numerous, but are all attended with congestion of one or more vital organs, which may endanger the life of the patient, and which may pass into actual inflammation, attended with effusion of plastic lymph, serum or blood.

The nature and effects of malignant paroxysm will depend upon various causes, as the state of the constitution of

the patient, peculiar idiosyncrasies, pre-existing diseases, the effects of diet and occupation, the composition of the blood and the functions of the organ or organs involved.

I. If the cerebro-spinal system is chiefly affected the paroxysm may be characterized by delirium, coma, convulsions and tetanic spasms; hence some writers have distinguished the comatose, the delirious, the convulsive and the tetanic varieties of malignant intermittents.

II. If the lungs or the pleura be primarily and chiefly involved, the difficulty of breathing, syncope, capillary obstructions and excruciating pains in the pleura, lungs and diaphragm may characterize the paroxysm.

III. In a third form the heart appears to be chiefly affected, either directly or through the cerebro-spinal and sympathetic nervous systems. This so-called cardialgic variety is marked by excessive pain in the epigastrium, either continuous or intermittent, intense suffering, great anxiety of countenance, vomiting and sometimes general spasm of the muscles.

IV. In a fourth form the abdominal viscera, the peritoneum, the stomach, small and large intestines, the liver, the kidneys, may one and all be involved, giving rise to the so-called peritonitic, gastric, choleraic, dysenteric, hepatic and nephritic forms of malignant intermittents.

V. In a fifth form, known as Algid fever, the cold stage is unusually protracted, there is great oppression at the chest and abdomen, restlessness, and prostration of nervous and muscular power.

VI. When from any cause, such as bad diet, excessive exposure to cold and wet, the continuous use of salt meat, or the prolonged action of the malarial poison, or by the introduction of certain parasites, as the *bilharzia hæmatobia*, the constitution of the blood is altered, hæmorrhage takes place during the congestive stage of malignant intermittent fever, we may have a sixth variety, which has been indicated as hæmorrhagic malarial fever or malarial hæmaturia.

Without doubt, in this sixth form of malignant intermittent, hæmorrhages from various organs, as the stomach,

lungs, kidneys and bowels, are directly due to the prolonged and potent action of the malarial poison upon the fibrin and colored blood corpuscles of the blood, as well as to the various alterations in the spleen and liver, characteristic of all the forms of malarial fever.

The hæmorrhagic form of malarial fever may be attended with many of the prominent symptoms of the preceding varieties, as obstinate vomiting of biliary (green grass), acrid matters, extreme thirst, restlessness, feeble, rapid pulse, oscillations of temperature, oppressive breathing, coma, convulsions and apoplexy. The hæmorrhagic malarial fevers prevail only at certain periods of the year, in certain seasons, and in certain well-defined districts of the United States, Mexico, Central and South America and the Antilles. The investigation should, therefore, be conducted in these various localities and under varied conditions.

The history of medicine, both in this country and in Europe, has shown that fevers attended with hæmorrhages from the mucous surfaces, and even black vomit, have prevailed at widely separated periods and in different countries and localities. Without doubt, certain causes wrought this change in the type of the diseases, and their causes may be arranged for purposes of investigation under the following heads:

(*a*) Peculiarities of the climate, temperature, rain-fall and physical and chemical constitution of the atmosphere. (*b*) Conditions of soil as to drainage, cultivation, etc. (*c*) Sanitary condition of the inhabitants; effects of food, clothing, occupation, agriculture and manners.

The complete investigation of the nature, causes and treatment of malignant intermittents should embrace, in addition to the above:

(*d*) Accurate records of the symptoms at stated periods of the day and night, exhibiting the changes of temperature, pulse and respiration, and unfolding accurately the manifestations of the nervous, muscular, cutaneous, circulatory, alimentary and urinary systems. (*e*) Microscopical examinations of the blood, associated also with microscopical and

chemical analyses of the surrounding air and waters. (*f*) Chemical analysis of the blood. (*g*) Chemical and microscopical analysis of the urine. (*h*) Chemical analysis of the sweat. (*i*) Chemical and microscopical analysis of the saliva. (*j*) Chemical and microscopical analysis of the vomited matter. (*k*) Chemical and microscopical analysis of the excrement.

The whole amount of the urinary constituents should be quantitatively determined each day and throughout the progress of the disease.

The post-mortem examination should embrace accurate details as to the physical, chemical and microscopical characters of the solids and fluids.

(*l*) General description of exterior. (*m*) Post-mortem changes of temperature. (*n*) Physical, chemical and microscopical characters of the cerbro-spinal and sympathetic nervous systems. (*o*) Physical, chemical and microscopical characters of the heart, and of the blood contained in the vessels. (*p*) Physical, chemical and microscopical characters of the liver and bile. The analysis of the bile should receive especial attention. (*q*) Physical, chemical and microscopical characters of the alimentary canal and its contents. (*r*) Physical, chemical and microscopical characters of the spleen, kidneys and liver. (*s*) Physical, chemical and microscopical characters of the marrow of the bones.

All these changes and deviations from the normal standard should be carefully delineated by color drawings.

The preceding investigations can only be conducted by the aid of the apparatus and requirements of a well-appointed laboratory. But under even the most adverse circumstances, and in localities remote from large cities, reports might be drawn up of great value by country practitioners embracing:

Medical topography. Reports of cases, including careful daily records of variations of symptoms, temperature, pulse, respiration, etc. Mortality, to cases and population; vital statistics. Influence of age, sex and race. Effects of diet, location, habits and mode of agriculture. Results of post-mortem examinations.—*Joseph Jones, M. D., in Hosp. Gaz.*

ART. II. *Therapeutics of Diarrhœa in Children.* By A. A. SMITH, M. D.*

GENTLEMEN: I desire to call your attention to-day to diarrhœal troubles, especially those apt to affect children, not alone infants, but those under seven or eight years of age. It would be impossible to go over much of the subject in an hour; I shall therefore make my lecture suggestive, and touch only some of the most important points. Whatever the cause, all children, whether infants or those older, ought to be kept quiet when suffering from diarrhœa. They should be kept in a partially darkened, quiet room, free from noise, and all talk in the room should be avoided, especially when the child is asleep. The nervous system in childhood is so impressible it is easily disturbed, and any disturbance of this character aggravates the diarrhœa. Infants under one year ought to be kept lying down as much as possible. They should not be jolted up and down as is the custom of most nurses and some mothers, in order to amuse them. If the child is under one year, let it be placed on a pillow, if the diarrhœa is severe, as it can be kept quiet more easily in this way than when lying on the lap. Even in changing the napkin care should be taken to move the child as little as possible. Don't be afraid to keep the room well ventilated in which the child lies. Mothers usually are over-careful for fear the child may take cold, and on this account are apt to keep the room too closely shut up. When the child is awake it can be carried carefully into open air, always in the shade. Salt-air is beneficial to almost all forms of diarrhœa in children, and this is specially so in regard to city children. We in the city, therefore, urge a ride on the salt water, or taking the child to the sea-shore, if possible. In all cases, in children under a year, if the diarrhœa is severe, keep warm applications over the abdomen; make a spice bag. Take a half ounce each of cloves, allspice, cinnamon, and anise seeds pounded, but not powdered, in a mortar; put these between two layers of coarse flannel, about six inches square, and quilt them in. Soak this for a few minutes in hot spirits

*An original lecture.

(brandy, or whisky, or alcohol), and water equal parts, and apply it to the abdomen warm, renewing it when it gets cool. In this way we not only get the effects of a poultice, but we also get the sedative and antiseptic effects of the spices. Great heat, with influences that depress the nervous system, bad hygienic surroundings, improper diet, too early weaning, bottle food, and dentition, are among the causes that predispose to diarrhœa. In all cases remove the cause, if possible.

METHOD OF REDUCING TEMPERATURE.

There is one symptom common to almost all cases of diarrhœa if severe, and in my opinion it is the most important, and that is the increase of temperature. The best means of reducing the temperature is by the external applications of cold. Since we have the Kibbe's cot, which you have seen here, the immersion of the child in a bath is practically done away with. The Kibbe's cot can be improvised easily; it is a pleasant and convenient way of giving the wet pack; is just as effectual as the bath, and has very few of its objections. Fold a small sheet so that it will cover the child from the axillæ to the ankles, place the child on the bed, leaving the arms and feet uncovered. The axilla can be dried easily, and the temperature be taken while the child is in the pack, or the thermometer may be introduced into the rectum, the most accurate way of taking the temperature. Water of the desired temperature may be poured on from a pitcher. In cases of slight elevation of temperature, say to 102° F., or under, sponging off the body with water about the temperature of 80° F. will usually answer the purpose, and it may be done often enough to reduce the temperature nearly to normal. But in all cases of an elevation of temperature above 102° F. resort to the Kibbe's cot or its substitute. Always remain and make the first application yourself. The parents will be timid about it. The child will cry, and it will be necessary for you to show them, by the good effects produced, the wonderful power by this means of reducing temperature, of calming the restlessness and irritability of the child, and of inducing sleep. Afterward you can teach them the use of the thermometer and the methods of application of the water. The temperature of the water may be at first 90° F.,

then gradually, as the child becomes accustomed to it, it may be made cooler until it is brought down to 80° F. in a few minutes. It may be necessary where the temperature is very high, or where it rapidly rises after it has been reduced, to apply the water even colder than 80°. Reduce the temperature to 99°. It usually goes down still farther after the child is taken out. Remove the sheet, put the child in a thin blanket, cover it up and let it sleep. It may be left in the pack twenty or thirty minutes, longer or shorter, according as you find the temperature down to 99°. In very severe cases, where the temperature rises to 105° F., or higher, it may be necessary to apply the cold every hour or two. In such cases you need not remove the child from the Kibbe's cot, but let it remain there for even days, if necessary. The cot may be made comfortable by folding a woolen blanket and putting it under the child. I can not speak too emphatically of the importance of the reduction of temperature in the treatment of the diarrhœas of children, and of this means of accomplishing it. It is, however, only an aid to other means of treatment.

NURSING AS A CAUSE OF DIARRHŒA.

One of the most frequent causes of diarrhœa in young infants is too frequent nursing. The child, when a few days old, can be taught to nurse about every two hours during the day, and every three hours at night. My first question, when I am called to see an infant under six months suffering from diarrhœa, is, "How often does the child nurse?" and frequently find it has no regularity of nursing, sometimes nursing as often as every half hour. By establishing regularity of nursing, the diarrhœa is often cured. A child under four months, as the rule, will have two, sometimes three evacuations in twenty-four hours. This number is within the range of health. You will see many cases of diarrhœa with very little constitutional disturbance, but frequency of movements and the appearance of the movements not particularly unhealthy. Bismuth, subnitrat., three grains every two or three hours, will cure such cases.

PRETERNATURAL ACIDITY.

Some infants have a tendency to preternatural acidity in the digestive organs. The diarrhœa that occurs in such cases

is accompanied with considerable pain, the passage of small, cheesy looking masses with the stools, the odor sour, and sometimes even offensive, the reaction decidedly acid. Such children may be given, with good effect, a teaspoonful of lime-water three times a day. Give it in two teaspoonfuls of milk. Chalk may be given. The mist. cretæ of the Pharmacopœia is a good preparation to give. It contains, besides the chalk, gum arabic, glycerine, and cinnamon, all of them good in this form of diarrhœa. Sometimes it is well to give a laxative, as some of these cheesy masses may have collected in the intestines and may be acting as an irritant. The indication is to remove them. I have found the following prescription a better one to give than the traditional castor-oil:

℞. Pulv. rhei rad. gr. xv.
Sodæ bicarb. gr. xxv.
Aq. menth. pip. ℥ ij.

M. Sig. ℥ j. as laxative to a child from one to four months old.

In this prescription we get the laxative effects of rhubarb with its so-called secondary astringent effects, the alkali, and the sedative, and antiseptic effects of the peppermint.

In any case of diarrhœa, where there is reason to believe there is any irritant in the intestines, the treatment may be commenced by giving a laxative to remove it.

DENTITION AS A CAUSE OF DIARRHŒA.

Between the sixth and twenty-eighth month dentition plays a very important part in the production of diarrhœa. It might be called a nervous diarrhœa, for it is probably due to reflex nervous disturbances. If dentition is not directly responsible for many of these diarrhœas, it is indirectly so by putting the system in a condition to be more susceptible to all those influences which do produce diarrhœa. In all cases where the gums are swollen, lance them. In any case where it is about time for the tooth to come through lance the gums over the tooth thoroughly and draw some blood. I believe the disturbance is often due to pressure of the tooth deeply in, and before it shows much swelling on the surface. Lanc-

ing the gums never does harm. It is better to err on the side of lancing them when there may be no necessity, than to fail to lance when there might be necessity. I have often seen a child having from ten to twelve movements a day relieved entirely by lancing the gums, and with no other treatment. It is in these cases that the bromides prove so effectual. Give the following combination of a bromide with mucilage to a child between six months and a year; older children a larger dose:

℞. Sodii bromid. ʒ ss.
Mucilag. acaciæ,
Aquæ puræ, āā q. s. ad. ʒ ij.
M. Sig. ʒ j. q. 3 h.

The bromide diminishes the reflex disturbance, and the mucilage is soothing to the irritated intestinal mucous membrane.

ERRORS IN DIET AS A CAUSE OF DIARRHŒA.

Another cause of diarrhœal troubles is the giving of all sorts of diet too early. There is a desire to make the child strong and grow more rapidly. Meat, vegetables, and farinaceous articles in abundance are given to children even eight or ten months old. A child under eight months ought to have no other diet than milk, and even up to two years milk should be its main diet. Human milk is the best during the first year, or until weaning; but often from necessity the child is brought up on the bottle. During the first eight months cow's milk diluted one-fourth with barley water makes the best diet. The ground or crushed barley should be boiled with water of sufficient quantity, so that when cold it is about as thick as thin cream. The milk should be given about blood-warm and a little sweetened. What place should condensed milk be given in the feeding of children? I should give it a place on the shelf at the grocers. I have tried the condensed milk with children thoroughly, and have seen it tried in the practice of others, and must protest against its use. Children fed on condensed milk, although they may thrive well apparently, yet when they fall ill show very little resisting power, and particularly when they fall ill

of diarrhœa, they weaken very rapidly and the diarrhœa is apt to be obstinate. There are exceptional cases in which it may be used, and some cases in which it is desirable to use it for a short time. When bottle-fed children suffer from diarrhœa it is well to boil the milk and make the barley-water thinner and give more of it, say one-third barley-water to two-thirds boiled milk. I have found thoroughly cooked wheat-flour an admirable food for children with diarrhœa. Have it prepared in this way: Put about two pounds of flour in a muslin bag, tie a string around the top of it, and suspend it in a kettle of water and boil it for five hours; then let it get cold. Take off the bag, cut off the outside dough and grate it. Thicken boiled milk with this to about the consistency of a thin gruel, or about thick enough to pass through the rubber nipple of a nursing bottle. All food for children should be thoroughly cooked. Still more is this to be observed when they are ill of diarrhœa. As a rule, feed children suffering with acute diarrhœa just as little food as will satisfy their hunger, and often a little cold water will relieve their thirst and lessen the desire for food. Avoid alcoholic stimulants, unless there is exhaustion. Champagne iced may be given in small quantities, if there is obstinate vomiting.

FLATULENT DIARRHŒA.

There is a flatulent diarrhœa which occurs in young children and gives much trouble. The movements are frequent but very small, and the flatulence is sufficient to keep the child awake nights.

I have found the following prescription an excellent one in such cases:

℞. Magnes. calcin. ʒ i.
Spts. amm. aromat. m xl.
Tinct. assafœt. ʒ i.
Anisette. ʒ vi.
Aq. cinnamomi q. s. ad. ʒ iv.

M. Sig. ʒ i. every half hour until relieved, to a child from three weeks to four months old. Two or three doses will usually relieve.

DIARRHŒA DEPENDENT ON NON-DIGESTION OF SUGAR.

There is a diarrhœa which occurs in the summer, characterized by frequency of discharges; the movements are green, accompanied with pain, and in many cases the stomach is so irritable that vomiting is a troublesome symptom. Probably the diarrhœa is due to non-digestion of sugar. In connection with such cases I would like to call your attention to kumys or fermented milk. In this preparation the milk has already taken the first step in digestion. There is, or ought to be, no sugar in it; the casein is in a fixed condition, and consequently can not undergo the changes of coagulation and putrefaction, and there is a small quantity of alcohol, but it is in such a combination that it is easily assimilated. The kumys is charged with carbonic acid gas, but children do not take it readily with the gas in. It may be gotten rid of by taking the kumys out of the bottle and pouring it from one pitcher to another a few times. A small quantity may be kept out for immediate use, and the remainder put back into the bottle, the bottle corked and put in a cool place. Sometimes children who are unable to retain anything else can take a teaspoonful of kumys at a time and digest it, and frequently without any medicinal treatment will recover under its use. Twelve hours is as long as it can be kept safely, after once uncorking it. The child need take no other food while it is taking the kumys. It is itself food and drink. It is sour, and mothers are tempted to sweeten it to make it palatable. Of course it should never be sweetened, and should never be given within two hours after any other form of milk, and should be given cold. After the first repugnance to it children take it quite readily; even children as young as six or eight months can be made to take it by taking advantage of their thirst and giving it at first in small quantities. Kumys may be used in many forms of diarrhœa because of its easy digestion. That made by Dr. E. F. Brush, of this city, is the only preparation of it I have found reliable.

DYSENTERIC DIARRHŒA.

There is another form of diarrhœa quite common in sum-

mer, characterized by what are known as dysenteric discharges, that is, quite frequent evacuations and straining, as in dysentery, and the evacuations are about the consistence of pudding, or thin jelly, and are usually of a pinkish color. This pinkish color is due to the admixture of blood and mucus with the substance that passes the bowels. I have found small doses of castor oil and opium, given in mucilage, an excellent combination in such cases, as in the following prescription:

℞. Ol ricini. ℥ i.
Sacch. lactis. ℥ ss.
Tinct. opii. camph. m xxxij. to ℥ iss.
Mucilag. acaciæ,
Aquæ puræ, āā q. s. ad. ℨ i.
M. Sig. ℥ i. q. 2 or 3 hours.

Add the paregoric according to the age of the child. For a child under a year, four to eight drops. For child of one or two years, ten drops. Don't forget the general suggestions in regard to diet in all cases of diarrhœa. It is well sometimes in these cases to give starch-water enemata. If the enemata are given the paregoric may be left out of the castor oil mixture, and laudanum may be put in the enema. One or two drops of laudanum with one to three tablespoonfuls of starch-water, may be given according to the age of the child. The starch-water should be made about as thick as thin cream, and given tepid. It may be repeated every three to six hours, according to the severity of the attack.

INFLAMMATORY DISORDERS.

There is a large class of summer diarrhœas included under the term of inflammatory disorders. They are accompanied with great pain; frequency of movements; there may or may not be a small quantity of blood passed with the movements, more or less increase of temperature, with disturbances of the nervous system, and there may or may not be gastric irritability. The indications are to reduce the temperature, manage the diet according to the directions I have given you, surround the child by the best possible hygiene, put the warm applications over the abdomen, and give inter-

nally a combination of opium and camphor. Tully's powder, which consists of morphine, camphor, and prepared chalk, makes a good combination. The dose for an adult is the same as Dover's powder. Ten grains contain one-sixth of a grain of morphine and a little over three grains of camphor. A child three to six months old may be given an eighth of a grain every two to six hours, according to the severity of the attack and the control the powder has over it. A child six to eighteen months may be given one-sixth to one-fourth of a grain in the same way. After the acute symptoms have been controlled there remains in many cases a tendency to looseness of the bowels, with very little constitutional disturbance. Stop the Tully's and give the following:

℞. Ac. sulph. dil. m xxiv.
Salicin gr. xxiv.
Glycerinæ ℥ iij.
M. Sig. ℥ i., t. i. d.

Do not give it within a half hour of the taking of milk. The sulphuric acid has a tonic and astringent effect, and the salicin, besides its tonic effect, acts also as an anti-fermentative.

CHOLERA INFANTUM.

And now, as to the treatment of a disorder of children, which is the dread of all physicians, especially young ones, and justly so, for it is a formidable disease. I look upon cholera infantum as a disorder of the nervous system, and the disturbances of the alimentary canal as only the local manifestations of a constitutional disorder. It occurs from great heat, but it has always seemed to me that in addition to great heat there was some other element. I have noticed that cases are much more frequent when, besides great heat, there were certain atmospheric influences which depress the nervous system greatly. "Dog days," as they are called, are very fruitful in the production of cholera infantum. Among the poor, great heat, poorly ventilated rooms, poor hygiene in all its forms and with all its attendants, improper food, particularly bottle food, favor the development of the disease. I recognize two varieties of cholera infantum, and divide

them, according to their manifestations, into congestive and exhaustive. In the congestive form there is redness of the surface of the body, especially about the face and head; redness of the conjunctivæ, great elevation of temperature, the pulse rapid and full, the nervous symptoms marked, twitching of the muscles, and frequently convulsions; the vomiting and purging violent, the matters vomited and passed being very thin and of enormous quantity. All of these symptoms come on very rapidly, differing in this respect from other forms of diarrhœa. The two special indications are to reduce the temperature and control the nervous manifestations. Apply cold according to the directions I have given you. Give hypodermic injections of quinine and morphine. Give to a child of six months one grain of quinine and about $\frac{1}{200}$ of a grain of morphine every four or six hours, according to the indication. For each additional six months of age an additional half grain of quinine and an additional $\frac{1}{200}$ of a grain of morphine. To simplify the matter I will give the prescriptions of the solutions of quinine and morphine:

℞. Morph. sulph. gr. ss.
Aquæ destillat. ʒ i.

M. Sig. mv. by hypodermic injection for a child six months old.

℞. Quiniæ sulph. ʒ i.
Ac. sulph. dil. q. s.
Acid carbol. cryst. gr. v.
Aquæ destillat. ʒ i.

M. Sig. mviij. by hypodermic injection for a child six months old.

Usually the stomach is so irritable that medicines and food are both vomited. After the temperature is reduced, and the nervous system is rested, small quantities of food can be given. Small pieces of ice may be given to allay thirst.

In the other variety, the exhaustive form of the disease, there is paleness of the surface of the body; little or no elevation of temperature; indeed, the temperature in some cases is below normal; the pulse is rapid and feeble; the nervous symptoms, although present, are not as marked as

in the other variety. The vomiting and purging are violent, the child sometimes getting rid of more fluid in a few hours than it has taken in days. The emaciation is very rapid and great. The indications for treatment are to check this enormous loss of fluid and sustain the patient. Our main reliance must be on opium and alkalies and stimulants, with the general directions I have given you in the beginning of the lecture. Opium in small doses, in addition to the other effects claimed for it, is a cardiac stimulant, thus meeting one of the chief indications in this disease.

The following combination is good:

℞. Tinc. opii camph. ℥ iij.
Mist. cretæ ℥ iij.

M. Sig. ℥ i. q. 2 or 3 h. to a child of six months.

Sometimes nothing is retained by the stomach. In such cases it is necessary for you to give the opium hypodermically. Give the $\frac{1}{200}$ grain morphine as directed in the other variety of the disease, but do not give the quinine.

Alcoholic stimulants should be given. Brandy is the best. Give five drops of brandy in a teaspoonful of water, every hour, to a child of six months, if there is great exhaustion. This quantity may be increased or diminished according to the indications. In some cases of cholera infantum a child becomes suddenly much more exhausted, pulse becomes more rapid, extremities are cold, perspiration comes out freely, and the child seems to be going into collapse. An enema of hot water will sometimes revive such a child wonderfully. Let a good quantity of hot water be used, say half a pint, and hold a towel to the anus afterward, in order to have the water retained as long as possible. Along with this give internally spirits of camphor, from six to ten drops. It may be put in with the brandy, and the two given together for a few hours. In any case of diarrhœa, where these symptoms of great exhaustion occur with the coldness of the extremities, the hot water enemata may be given.

BEEF TEA.

The very common habit of giving beef tea in the diarrhœa of children prompts me to say a word in regard to its use.

Of course, it is given with a view to sustain the strength of the child, but I have found that almost invariably it acts as an irritant and aggravates the disease. Sometimes it seems to pass the bowels in the same form in which it was taken. In any case of acute diarrhœa I would advise you not to give beef tea.

OPIUM.

I believe that opium is given too indiscriminately in the diarrhœas of children. It has its uses, and is an orthodox remedy in such disorders, but it is given very frequently when other remedies would do quite as well and much better, and would produce none of the ill effects of opium.

Good nursing, removal of causes, keeping the patient quiet, regulation of the diet, improving the hygiene, reducing the temperature, removing the cause of disturbance of the nervous system, will, in the great majority of the cases of diarrhœa in children, do away with the necessity of medicines. —*Med. Record.*

ABSTRACT DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."

CONDUCTED BY EDWARD MILLER, M. D., LOUISVILLE, KY.

ON THE PRODUCTION OF CYSTITIS BY CONTAGION THROUGH THE USE OF INSTRUMENTS. By SIR HENRY THOMPSON, F. R. C. S., Etc.—Sir Henry Thompson says he has long suspected that cystitis is capable of being transmitted by the inflammatory products from the bladder of one patient to that of another. Every one knows that the operation of sounding the bladder is sometimes followed by an attack of inflammation. Such an occurrence is not unnatural, as a delicate mucous membrane is mechanically disturbed. This shows the importance of using the smallest degree of distension and movement possible, and also of forbearing to make such exploration unless absolutely necessary. According to Sir Henry Thompson, there are two modes, distinct from each other, in which inflammation follows sounding. Thus, in some instances, the patient has a shiver occurring in

three or four hours after the examination; soon afterward the urine is passed too frequently and with pain, becomes cloudy and some general fever sets in. In such cases the inflammation is clearly due to mechanical irritation, and if the patient be healthy, it soon subsides. In a few other cases no disturbance occurs until the lapse of forty or fifty hours after sounding. The patient seems perfectly well after the sounding, and complains, if of anything, of slight soreness during the first few hours. After the interval named he experiences a little undue frequency in micturition, loses appetite, is chilly or has a shiver, and by degrees symptoms of cystitis appear which runs a marked course for a few days, varying according to the circumstances of the case. Usually the patient attributes his condition "to some cold he must have caught the day after the examination," and by no means ascribes his trouble to the instrument, as he infallibly does in the circumstances first described. Why these phenomena should occur so long after provocation Sir Henry Thompson had often wondered, but recently a case occurred which seemed to throw light upon the subject. A gentleman, who had occasion to pass a catheter for himself daily, used, on one occasion, a jointed catheter which he had previously used on a patient suffering from severe cystitis, with muco-purulent urine. Forty-four hours afterward he had himself an attack of cystitis, with the usual symptoms. There can scarcely be a doubt that in this case some matter had lodged in the screw-joints of the catheter, and thus transferred the disease from one subject to another. In order to prevent any transference of matter to the bladder and urethra by instruments, certain precautions are to be observed. First: All metal instruments, catheters, sounds and lithotrites, after use, are to be plunged into boiling water, to which has been added either some soda or carbolic acid. All gum bougies and catheters are to be placed in a bath of weak carbolic acid immediately before and after use. Second: A solution of carbolic acid is to be added to the oil used for the lubrication of the instruments. There is no danger of any caustic or irritating effects from the carbolic

acid since oil is the remedial agent for its caustic action and its disinfectant influence is unimpaired. Twelve grains of carbolic acid to the ounce of oil is a convenient strength, and if all instruments after being well cleaned are anointed with it, safety from the occurrence of any contagion may be insured.—*British Medical Journal.*

Are First Labors More Dangerous Than Others? By J. G. Swayne, M. D.—The common idea is that first labors are more dangerous than others as they are more difficult, and people measuring their danger by their suffering readily assume that they are more dangerous. The experienced *accoucheur*, however, after witnessing the wonderful recoveries after severe and protracted instrumental labors knows different. Dr. Swayne gives the statistics of 1,022 cases of labor, of which 231 were primiparæ and 791 multiparæ. No mother died amongst the 231 primiparæ, whilst five died amongst the multiparæ. The cause of death in one case was heart disease, in another puerperal scarlatina, in another ruptured uterus, in another pneumonia, and in another convulsions. The proportion of maternal deaths was one in 158, whilst in 231 primiparæ there was no death. As regards the children, the difference is slightly the other way. In the 231 first labors 18 infants perished, or 7.8 per cent.; whilst in 791 multiparæ 47 infants died, or 5.9 per cent. In first labors, owing to the prolonged first stage, the forceps are used ten times as often as in other labors. Infants die from pressure during prolonged labors and from the rigidity of the perineum, and of the external orifice; in primiparæ, presentations of the inferior extremities are much more dangerous to the child. In the 791 multiparæ there were seven arm presentations; in the 231 primiparæ not one. The greater cause of infant mortality in multiparæ is premature birth. Prolapsed funis, as a cause of death, is common to both. The most formidable complication of labor, as regards the safety of the mother, is hæmorrhage, both accidental, unavoidable and post-partum. This is common to both classes, although the amount of blood

lost is, in general, far greater in the multiparæ. Laceration of the perineum is more frequent in the primiparæ. In the 791 cases of multiparæ there were two cases of hydrocephalus, two of hydramnios, two of convulsions, and one of ruptured uterus, and there is also a greater proclivity to give birth to twins amongst multiparæ. There is no doubt that first labors last longer, and are attended with greater suffering than others, and when obstetric practitioners were so reluctant to use the forceps, this state of things did greatly increase the dangers of first labors. The more frequent and skillful use of the forceps has quite abolished the dangers of a prolonged second stage of labor. Primiparæ have certain advantages over multiparæ; they are generally young, and in the prime of their health and strength. After too frequent child-bearing, the uterus is apt to remain in a state of subinvolution, a condition favoring both congestion of its vessels and atony of its muscular fibres. This condition favors miscarriage, and also renders multiparæ more liable to post-partum hæmorrhage and septicæmia. This want of tone would tend to increase the transverse diameters and diminish the longitudinal diameters of the uterus, and this would be aided by the relaxation of the abdominal parites so often met with in multiparæ, the so-called "pendulous belly." If the transverse diameter of the uterus is increased, the child naturally takes up such a position that its long axis conforms with this diameter, and we have a transverse presentation as a new source of danger. Multiparæ are also more liable to certain dangerous complications arising from various degenerations of the uterine tissue. Rupture of the uterus is one of these. Dr. Swayne is, for the above mentioned reasons, and as the results of his own experience, led to the conclusion that first labors are less dangerous than others to the mother, but slightly more so to the infant.—*The Obstet. Journal of Great Britain and Ireland.*

Differentiation of Drunkenness From Coma. By John Morris, M. D.—The frequent mistaking of brain-diseases for drunkenness brings reproach on medical men. Unfortunately

the manifestations of drunkenness, as a disease, has been but little studied and is little understood. The different conditions which may be mistaken for drunkenness are, 1st, fracture of the skull; 2d, concussion of the brain; 3rd, cerebral hæmorrhage; 4th, embolism and thrombosis; 5th, uremia, from Bright's disease; 6th, epilepsy; 7th, narcotic poisoning; 8th, heat apoplexy; and 9th, hysteria. In the cases of fracture or concussion, the greatest difficulty is met with in the absence of any history of the case, for the reason that the coma is frequently profound and simulates that of drunkenness. The smell of the breath can not be relied on, as many industrious workmen are in the habit of using a small quantity of liquor daily. The temperature, the condition of the pupils, the breathing should all be carefully observed, but the true rule is to keep the patient under careful watch until a fixed diagnosis is obtained. Cerebral hæmorrhage is more frequently mistaken for drunkenness than any other affection, as the symptoms are similar in several stages of the two diseases. There is a stage of noisy violence and uproar in both, and also a condition of complete coma. In ordinary cases of apoplexy there is paralysis of one side or the other, unless the hæmorrhage be into the pons or lateral ventricle, and if there are convulsions, they are usually more severe on one side of the body in apoplexy. The state of the pupils can not be relied on, although squinting as well as conjugate deviation of the eyes is a distinctive mark of apoplexy. Dr. Macewen, of Glasgow, states that the pupils in alcoholic coma are contracted, and if the patient is shaken or disturbed, the pupils dilate but very soon contract again. Dr. Reynolds has witnessed the same thing in cases of acute softening. Cases of ingravescent apoplexy, commencing with delirium or convulsions and terminating in coma, are frequently mistaken for drunkenness, provided the smell of alcohol be detected in the breath. In embolism the coma is sudden and transient, and in thrombosis the paralytic symptoms are well marked. The coma of uremia is generally preceded by convulsions, the breath has a peculiar fetor, and the urine is loaded with albumen. Epileptic coma is usually of short du-

ration, and if the tongue is bitten or bleeding, or if hæmorrhagic spots be discovered beneath the conjunctiva, all difficulty of diagnosis is removed. In narcotic poisoning, if no history of the case can be obtained, the diagnosis is difficult. The contraction of the pupils takes place in alcoholism as well as in apoplexy seated in the pons. The smell of opium can frequently be detected in the breath. The coma of sunstroke is often followed by great mental disturbance and outward violence. There is one very simple diagnostic mark in sunstroke which is never absent; it is the intense heat of the head—a heat which is found in no other disease, save yellow fever. The cases of hysteria are not so much characterized by coma as by a state of excitement. Dr. Morris summarizes the methods of examination in coma as follows: 1st, an examination of the head and body for fracture of the skull and external injuries; 2d, examination for hemiplegia, squinting, conjugate deviation or facial paralysis; 3rd, examination of the mouth and tongue; 4th, the legs and eyelids should be examined to see if edema had previously existed; 5th, an examination of the urine, both for albumen and alcohol; 6th, a stomach pump may be used in many cases with great advantage; 7th, a history of the attack and its general features should be inquired into, if possible; 8th, the pupils and breath should both be examined and the temperature taken, though undue importance should not be attached to the evidence afforded by such an examination.—*Maryland Med. Journal.*

Posture as a Means of Relief in Strangulated and Incarcerated Hernia, with a General Consideration of the Mechanism of Reduction. By Frank H. Hamilton, A. M., M. D.—Dr. Hamilton first describes several cases of hernia which were easily reduced, after the failure of previous efforts, by elevating the feet of the patient so as to make the upper extremity the lowest. He does not ascribe the reduction to the mechanical effects of posture alone, inasmuch as other measures, such as taxis, icebags and anæsthetics were employed also, but he is convinced that posture was, in all

cases, the chief cause of the reduction. He then describes the hernial apertures, the different postures, the effects of medicines, etc., and arrives at the following conclusions: 1. The hernial apertures are not, only with few exceptions and in slight degree, either directly or indirectly under the control of the muscles. Relaxation of the muscles does not usually relieve strangulation, nor does muscular spasm cause strangulation. 2. Posture, whether intended to relax the muscles, the tendons, or the fasciæ, does not relax the apertures where the seat of the stricture is in the sac itself, when the hernial aperture is old and has become established or fixed in its form or has become a canal in some sense independent of the original opening. Nor does it relax these openings in femoral or inguinal herniæ when the stricture is, as it usually is, at the internal ring. 3. Neither ointments nor warm or cold applications affect these apertures. 4. Neither chloroform, nor bleeding, nor the hot bath, nor, indeed, any constitutional measures, cause these apertures to relax and dilate. 5. Hernial apertures can seldom be relaxed except by a surgical operation. As the viscera become constricted by pressure against the apertures, their relaxation does not, ordinarily, constitute a part of the mechanism of the release of a strangulation and of the return of the viscera.

As to the Effects of Taxis and Inward Traction. — 1. Taxis or pressure from without is first in point of importance as a means of reducing strangulated hernia. 2. Inward traction is second to taxis. It is effected by posture, and either indirectly by paralysis of the abdominal muscles or of general muscular relaxants and by emptying the bladder and lower gut. It is effected directly by peristalsis, anti-peristalsis, and gravitation through the agency of posture. Inward traction takes the place formerly assigned to relaxation of the apertures. 3. Emptying the bladder and rectum and distracting the attention of the patient are measures which remove certain obstacles to reduction by taxis and indirectly favor inward traction. 4. Chloroform, the warm bath and bleeding, overcome the resistance of the abdominal muscles

and possibly by permitting the normal action of the intestines to continue, whilst the abdominal muscles are paralyzed. Ice, as a local application, can only relieve the button-holing when it is due to congestion. 5. Opium operates indirectly by paralyzing the abdominal muscles. 6 and 7. Emetics and purgatives effect their good result by virtue of the inward traction, caused by the upheaval of the abdominal viscera, and by anti-peristalsis. They are both liable to do harm when not successful. 8. Enemata cause peristalsis, occasionally anti-peristalsis. Tobacco enemata in addition by inducing general paralysis, remove the resistance of the abdominal muscles. 9. All postures in which the viscera are dragged toward the upper portion of the abdominal cavity, aid reduction directly by causing an inward traction, and that posture is the best which, while it does not interfere with taxis and relaxation of the abdominal muscles, makes the most effective inward traction. Inversion of the body, however, displaces the viscera so far toward the upper part of the body that the abdominal muscles cease to have any power to expel the viscera downwards, and their relaxation is then a matter of no consequence.—*Hospital Gazette.*

The Importance and the Treatment of Anal Fissure. By R. Stansbury Sutton, A. M., M. D.—The most frequent and painful and most insignificant in appearance of the diseases which effect the anus is fissure or irritable ulcer, located within the folds of the tissue lining, the sphincter muscles. The integument, lining the external sphincter, terminates just within the anus at a white line, which precisely defines the division between the internal and external sphincters. The skin covering the external sphincter is thrown into folds or pouches when the muscle contracts, and at the bottom of one or more of these pouches will be found the "crack," "chap," "fissure," or "irritable ulcer." One of the principal recognized causes of fissure is the passage of hardened fæces. Anything that inflames the integument covering the sphincters may occasion it, as for instance the lochia running over the anus and inflaming the anus. A

troublesome pruritus, irritating fæcal matter, a bit of bone, a piece of oyster shell or the careless use of a syringe or bougie, may give rise to fissure. It sometimes follows diarrhœa, is often the result of syphilis, and, as Mr. Allingham expresses it, is "the accompaniment and probable result of polypus." Sensitive, nervous women with delicate skins are more liable to it, in the proportion of seven to one, than men. The only really reliable symptom of anal fissure is pain, either present at the time of defecation or coming on as an aching, more or less severe, from a few moments to an hour after stool. Patients rarely imagine what the trouble is, and come to the surgeon complaining of piles, dysentery, neuralgia and often for disease of the womb. In fact, Dr. Sutton has so often found rectal instead of uterine disease the cause of general ill health, that he now never fails to examine the rectum in female patients asserting the existence of uterine disease. It is also a good rule, if patient complains much of constipation or of having frequent small discharges with pain or aching, to examine for anal fissure. Place the patient on the left side, in Sims's position, for uterine examination; let the nurse or patient raise the right side of the nates with the right hand while you with the middle and index fingers of the left spread out the folded integument of the external sphincter and wipe it clean. If the light is good any "crack," "chap," or "fissure" will be seen. Never use an anal speculum for such an examination, as you may thereby cure your patient and lose your fee, for the methods of treating anal fissures are two, forcible dilatation and incision of the sphincter ani. Forcible dilatation (introduced by Recamier) is made by introducing the thumb into the anus, hooking the fingers over the ischia and stretching the muscles until their fibres give way. The incision of the sphincter ani, as first practiced by Boyer, consisted in the complete division of both sphincters. British surgeons have proved that it is not necessary to divide the internal sphincter at all, and only such fibres of the external sphincter as lie at the bottom of the fissure. Dr. Sutton prefers a combination of both methods, as is also practiced by Mr. Syme.

The patient being etherized, the surgeon passes the index finger of the left hand into the rectum; with the right hand he introduces, about one centimeter from the verge of the anus, a curved bistoury through the external sphincter and carries it up behind the sphincter to the lower edge of the internal sphincter, where he pushes it through the tissue along side the index finger and divides all the muscle over the blade. Both index fingers are now introduced into the internal sphincter and widely dilate it. A well oiled tent is placed in the wound, the bowels confined for three days, moved by laxatives, and at the the end of a week the patient is usually cured. Dr. Sutton does not make it a point to divide the muscle through the fissure unless it is lateral. If the edges of the fissure are callous, he pares them; if there is a little polypus, he chips it off.—*Med. and Surg. Rep.*

Chronic Articular Rheumatism. By Alfred Stillé, A. M., LL. D.—Chronic articular rheumatism may follow the acute which is not promptly and effectually treated, or it may occur as a distinct disease in damp weather, and is characterized by stiffness and pain in the joints. In the latter form the joints usually undergo no change, in the former they are quite stiff. The pain often extends to the muscles, fasciæ and long bones, and in the syphilitic form, the bones of the sternum and cranium are affected and covered with nodules. The symptoms are either habitual, or arise during the exacerbations. When exacerbations occur which are of indefinite duration, the disease assumes a subacute type, and all the joints become red, swollen and warm. The pain is aggravated by heat. If the joints do not become positively deformed a cure may be hoped for. If a cure is not established the functions of the joints are ruined, as these deformities are really lesions of the soft parts. The treatment of the sub-acute form demands the same internal remedies as in the acute—the local application of heat, the use of alkalies, moisture, local stimulants and alteratives are especially indicated. In the treatment of chronic rheumatism of the more superficial joints, blisters are the best applications; for the

deeper joints such as the hip, Dr. Stillé prefers moxas. In the elbow, knee and ankle-joints an excellent local alterative is sulphur in fine powder laid between the folds of linen and applied to the joints. Passive motion should be practiced to prevent stiffness, and the induced current of electricity should be frequently passed through the affected parts. Local hot baths of water, air or steam and especially sulphuretted baths are very efficacious. The principal medicinal agents employed are guaiacum, oil of turpentine, iodide of potassium, cod-liver oil, alkalies and sulphur. Cod-liver oil first gained its repute in medicine in this disease. The "Chelsea Pensioner," a remedy of great repute in England, is compounded of the following ingredients: flowers of sulphur, two ounces; cream of tartar, one ounce; powdered nutmeg, two drachms; mix and take two large teaspoonfuls at night and morning for three days. When the fibrous investments of the joint are swollen, iodide of potassium is a good remedy, and if there is a syphilitic taint, mercury in the form of bi-chloride should be combined with it, and pushed only to a slight extent. All general systemic disorders should be treated with iron, quinia and tonics. If all forms of treatment are of no avail, the patient should, if possible, pass the winters in some tropical climate.—*Hospital Gazette.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I. *Exophthalmic Goitre Occurring in a Child, and Followed by St. Vitus's Dance.**

The history of the case before us is as follows: Hattie Wagner, aged thirteen years, and a native of the United States, was admitted to the hospital on January 25, 1879. Her father, aged 58, is living, and in good health. Her mother, aged 40, is living, but has never been a strong woman. She has always been nervous and anæmic, and has had four dead and eight living children. Our patient has

*A clinical lecture delivered in Bellevue Hospital by A. Jacobi, M. D.

always been what is commonly called "a delicate child." She has had two falls and both times she struck upon her head; the first occurred when she was five, and the second when she was seven years old. Her mental condition has been fair. Some years ago she had ophthalmic goitre, for which she was treated at the Mt. Sinai Hospital. On December 30, 1878, she had an attack of pain in her right shoulder, and soon after lost the use of her right hand and leg. She had been attending upon her sick mother and had not taken much food for several days immediately preceding the attack. On admission it was noticed that there was some swelling of the thyroid gland, the left lobe being most prominent. The action of the heart was irregular; no valvular murmurs were found. The lungs appeared to be normal. Her gait was characteristic of well-marked chorea, and the choreic movements were almost continuous. When asleep the movements were usually suspended, but not invariably. She was put upon the use of iron. On February 8 she suffered considerably from headache, and bromide of potassium was ordered. On March 1 she had not had headache for some time, and the chorea was improving.

The case before us is the twelfth, occurring in children, which has been recorded in medical literature. Three of the eleven, previously related, are my own, and have been published in the June number, 1875, of the *American Journal of Obstetrics and Diseases of Women and Children.* The scarcity of the cases and the interest connected with them will be an excuse for a recital of their histories in this connection. Mary S., Bolton, Lake George, came under my observation in the summer of 1874, during my residence in the neighborhood of that village. She was ten years old, and had suffered from her symptoms "for years." She was of average size; well developed, pale, intellectual; a good scholar, a poor eater. Now and then her face and her feet would swell. The functions of her rectum and bladder were normal. She complained of great weakness; could not walk without an effort; the heart would beat violently; and dyspnœa set in on slight exertion. The dullness over her heart

was too extensive by one-half; the shock perceptible to both hand and eye from the third to the sixth intercostal spaces. A loud systolic murmur was audible all over the chest covering the diastole. It was of equal strength over mitral and aortic regions, and extended into the carotids. The radial pulse was feebler than normal. There was no history of any disease except malaria; no rheumatism. No swelling of the neck, no affection of the eye was noticed at that one visit she paid me; at all events, it must have been very slight, if it was present at all. Lungs were normal; nor could anything abnormal be discovered in her abdominal viscera. Under the circumstances my diagnosis was that of a general chronic endocarditis, and the prognosis a very grave one. For a long time during the following autumn and winter she took iron and digitaline, and followed such dietetic rules as I saw fit to give. She called upon me again the day I left that part of the country, in the early part of September, 1875. To my astonishment she was better to all appearances in her general health than the previous year. She could walk better and her appetite had improved. The local symptoms were the same everywhere. The size of the heart was perhaps a little less; the murmur as loud and extensive as last year. Besides, I noticed at once a slight protrusion and immobility of her eyeballs, a staring look, and somewhat swollen lower eyelids and considerable goitre. The diagnosis was changed into that of Graves's disease, and the prognosis corrected accordingly. Three months she took tinct. ferri and digitalis regularly, and when in January, 1876, I received her news they were favorable. Since that time she has been treated now and then, but she has not outgrown her hydræmia and some slight cardiac murmur to this very day.

Dr. Moeller, of West Thirty-seventh Street, introduced to me a little patient of nine years, Louisa W. (whom he had attended for several months), a few years ago. When presented to me she was greatly improved already. Still she was anæmic and of small stature; smart and a good scholar. The contractions of her heart were both visible and

palpable over three intercostal spaces—the pulsations of both carotids unusually distinct. The systolic murmur was strong and audible over the whole chest, both anteriorly and posteriorly. Her eyes did not protrude. The thyroid gland was slightly swollen on the left side; very much so, and protruding, on the right. It was not the first time, however, that I noticed a unilateral swelling of the thyroid gland in Graves's disease. She had steadily improved under the use of iron and digitaline (one-tenth grain daily) and quinia, and roborant diet, and thus the treatment was continued. When I saw her four months afterward her general appearance was about normal; still the child was small, her eyes did not protrude, her goitre was not visible to the left of the median line, and less marked than formerly on the right; her heart's action was less impetuous, and the murmur less loud and less extensive. Of her complete recovery I entertained no doubt.

The third case is an exact counterpart of the one just mentioned. She was a patient of the clinic, and its records contain the few notes which were taken at her two visits. She was nine years old, of average size, not remarkably anæmic. Heart loud and impetuous; systolic murmurs very strong and extensive; eyes not protruding; the right lobe of the thyroid considerably, the left but slightly, swollen. Nothing was known about a previous disease, nor was there any discoverable at the time of our examination. A similar treatment was resorted to, with what effect we have had no means to ascertain since.

The main symptoms of the disease when found in children are the same as reported by Flajani, Parre, and Adelmann, and finally appreciated in their full value by Graves and Basedow. It is well known to you that the complex symptoms are palpitation and enlargement of the heart, swelling of the thyroid gland, and protuberance of the eye. In most of the cases all the symptoms are present; in some, one or the other may be absent. Particularly is that the case with regard to the swelling of the thyroid gland and the exophthalmos; the latter perhaps more so than the former. In fact, in a

number of cases of children affected with the disease, the latter was either absent, or but imperfectly developed. The area of dullness on percussion over the heart is considerably enlarged. Its shock is seen over two or three, sometimes more, intercostal spaces. It is not always very strong, but distinctly visible. There are murmurs all over the heart, and over a greater portion of the large arteries and veins. Both arteries, and particularly veins, are found dilated. Even the arteries of the retina have been found enlarged. The pulse is very frequent—120, 150, 180, and even more. The palpitation of the heart and the corresponding dyspnœa, is a very serious and constant complaint on the part of the patient. The circulation is suffering all over the system. There is sometimes œdematous swelling of the hands and feet. There is dizziness and great irritability. The complexion of the patients, who are mostly very anæmic, is generally pale and sallow, and changes very frequently. The face suddenly flushes, is now and then covered with perspiration; so with other parts of the body. Ebstein reports a case of unilateral hyperidrosis; and similar observations have been made by other authors, such as Nitzelnadel and Chvostek. The temperature is generally not increased; but when the nervous excitement is very great a slight increase has sometimes been observed. Though the dilatation of the blood-vessels be very general, the spleen has, as a rule, not been found enlarged. Nor have there been found the so-called *taches cerebrales* of Trousseau, which are so commonly found in meningitis, sometimes also in typhoid fever, or toward the fatal termination of other serious diseases, and mean nothing else but vaso-motor paralysis. The swelling of the thyroid gland will sometimes be seen at an early stage of the disease, and its increase in a number of cases is very rapid. Sometimes it takes a long time. however, before it is fully developed. Its condition is not always the same. It may be painful or painless; soft or hard; compressible or not. It may be unilateral or bilateral; it may be changed within a very short time, or remain unchanged for a long time. In fact, the gland may never return to its original size. When unilateral, it appears

the right lobe is more frequently swollen than the left. There are but few cases, however, in which but one lobe was affected through the entire course of the disease.

The last symptom in the series enumerated is always the exophthalmos. It may be very slight. Sometimes its only symptom will be a certain stare on the part of the patient. Sometimes, however, the eye protrudes to such an extent that it appears very large, indeed, a large portion of the sclerotica being visible outside the eyelids, which either close over the eye with great difficulty, or not at all. In consequence of this disproportion between eyelids and eye, the movement of the eyelids is retarded, and very slow indeed—a symptom which Graefe considered pathognomonic of the disease. In those cases in which the cornea is not sufficiently covered by the eyelids, and the movement of the latter is interfered with, the cornea is apt to suffer, and in not a few instances in which the disease has occurred in adults, destruction of the cornea has taken place in consequence. No such case, however, has been observed among children.

All the symptoms enumerated can be traced back to the disorders of the vaso-motor system, the sympathetic, and principally to its cervical portion. In fact, a number of anatomical changes have been found in the upper cervical ganglion in such cases. Still the number of post-mortem examinations has been but limited. The changes which have been found have either been proliferations of connective tissue, such as found by Lancereaux in the left ganglion inferius colli; or gray infiltration, such as reported by Reid in the middle and lower cervical ganglion; or enlargement and thickening of the cervical sympathetic, as found by Virchow. But when we come to sift the symptoms, it appears, from the knowledge we have of the physiological functions of the sympathetic, that there is apparent discrepancy. The large blood-vessels of the neck and the head are considerably enlarged—a symptom which we have been in the habit of attributing to vaso-motor paralysis. The symptoms belonging to the heart can be best explained by irritation of the sympathetic, and also those belonging to the unstriped muscles in the orbit and

the eyelids. This discrepancy, however, is explained away, and, it appears to me, very satisfactory, by the discoveries of Goltz and others, who find that the dilatation of blood-vessels *may* be due to vaso-motor paralysis, but *is* due, in many cases, to the irritation of sets of fibres of the sympathetic, which, when stimulated, will dilate blood-vessels. In this manner all the symptoms, those belonging to the eye, the thyroid gland, and the heart, would be best explained by taking them as the result of irritation of the sympathetic. The majority of cases which have been observed belong to adult women. In most of them this affection was not the only disease noticeable among them. Their history was one of previous disorganization of the nervous system. Many of them were anæmic from childhood, and suffered from disturbances of menstruation. A few whom I remember had suffered from St. Vitus' dance when children. Many had suffered long from trifacial neuralgia, from intercostal neuralgia, from hysterical symptoms of all kinds, and, finally, the symptoms of Graves' disease would develop themselves. There have also been complications with intellectual disorder. In a few cases, there were mania, melancholia, and epilepsy. Chlorosis has existed in a great many cases. Some were able to trace their disease back to emotional excitement, to sudden fright, or to traumatic injury of the head. In a very few cases—thus in the case reported by Solbrig, a boy of eight years—the mother had suffered from a similar affection. Thus the impression would be, even if there were no proofs, that the disease is not only intimately connected with nervous disorders, but is a nervous disorder itself, an impression more than fortified, even verified by anatomical changes found in post mortem examinations and the physiological explanation of all the symptoms. The case before us is peculiar, in that it has gotten nearly well, with the exception of a moderate amount of swelling of the thyroid gland, which is pretty hard, and not compressible. There is hardly any symptom left which can be traced back to the original disease—that is, with the exception of the chronic enlargement of the thyroid gland, but she must be considered well of her exophthalmic

goitre. She is so well that there are not even cardiac murmurs, neither organic nor functional, and certainly there is no exopthalmos visible at this time. In this condition it appears she has been for a year or two. No serious disorder has been noticed in her heart. To what extent her intellect or temper have suffered from her general disposition or from her sickness we are certainly not able to state, but there is a serious affection now present which, though it has not been observed very frequently, must still be brought into some connection with her original sickness. Two cases of Gagnon exhibited the very same complication which we notice here—that with *chorea minor*. In those cases also the exopthalmic goitre was the first affection, and was then followed by St. Vitus's dance. Our case exhibits none of the symptoms that we are apt to find in a large number of cases of *chorea minor*. There are no cardiac murmurs, there is no pain in the head or vertebral column, neither spontaneous nor upon pressure, which we meet with so very frequently. Thus it is to be taken as a simple neurosis, the cause of which is certainly unknown to us.

Without intending to go further into the principles of the pathology of the disease, I have to point to a few facts which it is well to emphasize once more. This child has got nearly well of her exophthalmic goitre. Heart and eye are normal. There is enlargement of the thyroid gland, which, as all the other symptoms have disappeared some time ago, will probably prove permanent unless relieved by proper treatment. It is now years since the disease commenced; and it may take years before the goitre will entirely disappear, if at all. If it does, the whole sickness will run a course perhaps of six or eight years—a not uncommon thing, when we remember such cases as, after lasting a half-dozen or a dozen years, would never get entirely well. On the other hand, it is worth while to remember that some of the cases reported have got well in a proportionately short time. Solbrig's case is, it is true, an exception; but it was so acute in its beginning and in its course, that ten days was sufficient for the disease to show its first decided symptoms, and disappear. The rule is, that the

patients suffer long and recover but partially. The percentage of complete recoveries is but small. Twenty-five per cent. have recovered completely. As far as children are concerned, it appears that most of them have not been so sick as many adults; and partial recoveries have, at all events, been accomplished in shorter time than amongst adults.

If the pathology of the disease is such as I have stated, the indications for treatment are simple enough. The results, as you have seen from the remarks made on the long duration of the sickness, and the small percentage of complete recoveries, are indeed not very encouraging. We have to deal with irritation of the sympathetic nerve, with dilatation of blood vessels, with a general neurotic condition, with deficient power of resistence, with anæmia, etc. Thus there are indications with regard to the general condition of the patient, and in regard to the direct treatment of the disease. As far as local treatment of the sympathetic ganglia of the neck is concerned, galvanism has been resorted to as one of the principal, perhaps as the main, remedies. It has been expected that it would, when directly applied to the ganglion of the neck, result in diminishing the size of the blood-vessels and the circulation about the heart, the neck, and the head. A great many cures have been reported; but it has always appeared to me that the novelty of the remedy had a great deal to do with the large number of speedy and absolute recoveries boasted of.

In general, it must not be forgotten that the application of the galvanic current to the deep tissues, and more still to a small point, has its great difficulties. The permeability to the electrical current, on the part of the tissues, differs greatly; and thus it is not in our power to limit the course of the galvanic current in certain directions. At all events a portion of the galvanic current is lost. Moreover a number of tissues and organs are influenced in the neighborhood of the point we aim at, and thus the effect, if not counteracted, is modified. I have always doubted whether galvanization of the sympathetic, by applying one electrode to the nape of the neck, and one directly on the ganglion by pressing down along the sterno-cleido-mastoid muscle, was as certain as it has been represented to be.

I can imagine that, in lean persons, and with a small electrode, the object can be accomplished to a certain extent, but to a certain extent only. It is impossible that an effect should be accomplished without, at the same time, affecting the pneumogastric nerve, which is in the immediate neighborhood, and which, so far as effect upon the heart is concerned, is directly antagonistic to the effect upon the sympathetic ganglia controlling the heart. I can therefore imagine that the irritation of the sympathetic is directly counteracted by irritation of the pneumogastric, both of them being reached by the same galvanic current. That I do not stand alone in this opinion has been proved in an essay by G. Fischer, in the *Deutsch. Archiv. fur klin. Med.*

As, however, this point is not absolutely settled, it behooves us to defer our final judgment until the cases are more numerous. Certainly, if a large number of cases have been, or will have have been, reported, we are justified in relying upon a remedy, although we do not know much about its *modus operandi*. If the irritation of the sympathetic nerve is the cause of the disease, it is very much more probable that the sedative effect of the galvanic current is the one to be relied upon, than that we should have to fall back upon its irritant effect. If that be so, very probably the frequent application for a short time—a few minutes only—will be more indicated than an application once or twice in the twenty-four hours. In connection with this theory and advice, the number of cases in which the bromides have given relief are explained by the sedative effect produced by the remedy. It is not at all necessary to fall back upon the potassium, with its effect upon the heart. Very probably its effect is due to the bromine in the combination. The theory according to which an irritation of the sympathetic is the cause of the disease explains best the success—at least, partial success—which digitalis has given in a number of cases, especially that of Solbrig, and in a few of my own. By acting as a stimulant on the pneumogastric nerve, it would relieve the symptoms brought about by irritation of the sympathetic. In a majority of the cases I have seen, not only in children, but in adults, there has been a de-

cided amelioration of symptoms under the use of digitalis. Digitalis will act pleasantly in the same degree as belladonna would act unfavorably. I add this remark at once, because belladonna, or its alkaloid atropia, have been so frequently administered in a number of neurotic affections.

Of nerve specifics, I know of but one that has acted favorably in a few of my cases, and that is *arsenic*. As a rule it is well tolerated. Its effect upon the digestive organs has not been remarkably unfavorable. On the contrary, it appears that it improves nutrition in neurotic persons suffering from anæmia, and a low standard of assimilation. It is always worth while to try it, either as Fowler's solution or better as arsenious acid, and better still in the shape of Pearson's solution of the arseniate of soda, for a successive period of weeks, sometimes of months.

Ergot has been resorted to in a number of my cases. Its effect upon the size of the blood vessels, no matter what its orignal effect may be upon the nerve matter, has always encouraged me in administering it in such cases, and I feel positive, without being able to explain the action in every instance, that I have seen good results follow its use. The same I can say of quinine. Not unfrequently, therefore, have I combined ergot and digitalis, or ergot and quinine, or ergot, quinine and digitalis, and believe that the combination of two or of all three has yielded good results. So far as ergot is concerned, it is desirable to begin with small doses. Even mild preparations, such as the fluid extract, sometimes are not well tolerated, and it will be necessary to discontinue them and use ergotine, either Bonjean's or Squibb's instead. Very frequently, almost uniformly, when the former was not well tolerated, the ergotine in the form of pills and in the combinations enumerated above, was well borne and successful. The constitutional debility in such cases will, as a rule, bear iron very well indeed. But sometimes it is tolerated only when the vascularity and irritability has partly disappeared; while these are very high it is better not to give it at all; arsenic is certainly generally better than iron. When the frequency of pulse has been diminished to a certain extent, when the flushing has

disappeared, and when the local and general perspiration has, at all events, been reduced, and the palpitations are less, the time for the administration of iron has arrived, and until that time other restoratives are indicated rather than iron. When the symptoms are greatly modified, and the swelling of the thyroid gland remains, the preparation of iron to be used is iodide, and the syrup of the iodide of iron is a mild form of administering it. It is well tolerated by the digestive organs, and any tendency to decomposition or fermentation on the part of the contents of the stomach is, to a certain extent, counteracted by the iodine developed by the decomposition of the preparation. Not infrequently in adults, and also in children, will the syrup of the iodide of iron suffice both as a stomachic and as a restorative. When, as you see it here, there is permanent swelling of the thyroid gland, not so much due to dilation of blood-vessels as to induration resulting from cellular tissue hyperplasia, the iodides are indicated. As our patient here is anæmic, I do not propose to give her the iodide of potassium, but the iodide of iron. I believe that local treatment with the tincture of iodine, or the application twice a day of iodoform in collodium (1 : 15), will certainly do good. I should also propose to allow a mild galvanic current to be applied to the tumor for its electrolytic effect, six or eight minutes, once or twice daily.—*Med. Record.*

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

ART. I.—*The Treatment of Post Partum Hæmorrhage.* By R. A. F. PENROSE, M. D., Philadelphia.*

The subject of post-partum hæmorrhage possesses special, and always fresh interest to the obstetrical practitioner; and, no matter how often discussed, any suggestions which may help him in the terrible conflict which this dreadful accident implies must ever be welcome. This accident of labor differs from almost all other accidents in this respect, that the medical attendant, though inexperienced or ignorant, *must* fight it

* From the Transactions of the American Gynæcological Society.

alone. Almost every other complication of labor admits of more or less delay in treatment, which delay gives time, in most cases, when necessary, to send for assistance; but this complication of post-partum hæmorrhage comes on so suddenly, sometimes so unexpectedly, and runs its course so rapidly, that the patient may die, or be beyond help, if instant and *efficient* treatment be not given her. And yet it is in these very cases—so sudden and unexpected in their invasions, so appalling in their bloody physiognomy, so quickly and certainly fatal in their termination—it is in these very cases that prompt and intelligent treatment is invariably successful; I use the expression "invariably successful" thoughtfully, and I design it to mean all the words imply; it is in these very cases that knowledge means life, and want of knowledge, death to the sufferer.

In much of the recent discussion on this subject, and we all know how extensive it has been, there has seemed to me, often, to have been a great want of definiteness and precision in the ideas entertained by those participating in the controversy, as to the conditions occasioning post-partum hæmorrhage, and as to the real, as well as the relative, value of the remedies urged in its treatment. This want of definiteness and precision, at times, has led writers to suggest or oppose some especial remedy or remedies, without regard to the antecedent conditions which may have caused the hæmorrhage; and, consequently, has led them to suggest or oppose, at times, a remedy, perhaps, of inestimable value in its proper place, but useless or dangerous out of its proper place.

It was my lot when a young and very inexperienced practitioner, to meet with several grave cases of post-partum hæmorrhage; the rough experience thus acquired led me to study the subject carefully, and the result has been a plan of treatment, which, after many years of public and private practice, has never, in my hands, known a failure. This plan of treatment I have taught for almost a quarter of a century, and I am in constant receipt of communications from former pupils telling me of its successful application in extreme cases coming under their care—indeed, in all of these years I have

received but one letter stating that the treatment had failed, and in this case, after exhausting all the usual remedies, an electric current finally arrested the hæmorrhage.

I will define post-partum hæmorrhage as a hæmorrhage from any of the parturient structures, from the moment the child is expelled, until the organs have returned to the condition they possessed prior to fecundation, or as nearly to that condition as their possibilities admit of. Undoubtedly, the great cause of post-partum hæmorrhage is a failure of the uterine muscle to assume that condition of firm contraction which is its natural state after labor, and in consequence of which shrinkage the blood-vessels ramifying through the walls of the organ are practically obliterated, and are thus rendered incapable of carrying blood to the torn utero-placental orifices. But though uterine inertia is the great cause of post-partum hæmorrhage, there are other causes occasioning it, which must be clearly appreciated in order to apply appropriate remedies. Thus, a cause of dreadful post-partum hæmorrhege is the partial morbid adhesion of the placenta to the uterus; here there is often the reverse of uterine inertia—the uterus may be in a condition of firm contraction; but the adherent placental mass, occupying no little space in the cavity of the organ, prevents and renders impossible that degree of shrinkage in size indispensable to the complete obliteration of the uterine blood-vessels and hæmorrhage is the inevitable result. To this class of causes might be added those cases where the hæmorrhage is caused by the presence of fibroids in the walls of the uterus, or of a polypus in its cavity.

The various lacerations possible during labor form another class of causes; lacerations of the os, of the cervix, of the body of the uterus, as well as lacerations of the vagina and of the perineum; and here, also, might be included the hæmorrhage caused by a ruptured thrombus.

A fourth class of causes embraces those cases where the essential shrinkage of the uterus is prevented by external abnormal peritoneal adhesions, or by a distended bladder.

A fifth class is due to diseases of the uterus, as cancer; the cancerous mass may act in several ways as a cause of post

partum hæmorrhage. In the first place, by its size, it may prevent the essential shrinkage, or it may so alter the character of the uterine tissue as to render it incapable of contraction, or it may greatly increase the vascular supplies to the organ.

A sixth class of causes are those which occasion great or sudden congestion of the womb, as, for example, improper exertion after labor, or powerful emotions.

Undoubtedly, however, as I have remarked, by far the most common cause of post-partum hæmorrhage is uterine inertia. The causes of this condition of uterine inertia are so well understood that it will be unnecessary here to discuss them. I deem the chief predisposing cause to be the idiosycracy of the individual. Some women have, naturally, what I may term, in a general way, a weak uterus, in other words, a uterus which performs all its parturient functions less perfectly than is typically natural, and hence a uterus readily acted on by exciting causes which would not be felt by an organ possessing full power. We meet with analogous conditions in other parts of the economy, where some organ or set of organs presents evidences of unusual feebleness, though the general strength of the individual may be good. As I write this, I have in my mind the case of a gentleman, now in his seventy-third year. A man, apparently in perfect health, who has suffered from a feeble bladder for over forty years, during thirty of which he has been under my observation ; and in all this long period he has always emptied his bladder by a catheter, yet in no other respect is there any other sign of disease or feebleness in this individual. There is no disease of the prostate, no stricture, and the sexual vigor is above the average, the man being the father of ten children. The brother of this gentleman (who was also under my professional care) died in his fifty-fifth year of a feeble heart. The idiosyncrasy of a weak uterus, then, I look upon as the great predisposing cause of that condition of flaccidity after labor which renders a hæmorrhage possible. It is unnecessary to refer to plethora, or to an altered condition of the blood as additional predisposing causes, since these causes can not occasion hæmorrhage,

if the uterine muscle shrink sufficiently after labor to obliterate the uterine vessels carrying blood.

The various exciting causes of this condition of uterine inertia are too well understood by us all to need discussion; the effects of a protracted, or of a too rapid labor, or of excessive distention of the uterus, by dropsy of the amnion, or by multiple gestation, most of us have seen. Indeed, the preventive treatment of post-partum hæmorrhage—a treatment which will, I firmly believe, in ninety-nine cases out of one-hundred, prevent it, where, without this preventive treatment, hæmorrhage would have inevitably occurred—the preventive treatment must be based on a most definite conception of all the predisposing and exciting causes that can possibly occasion the accident.

The design of this paper, however, is not to discuss the causes or the prevention of post-partum hæmorrhage; but rather, the relative value of certain remedies to be employed in its curative treatment. In considering the curative treatment, it is evident, however, that since the symptom depends on so many and such diverse conditions, it must require, at different times, many and diverse remedies—remedies, too, bearing certain definite relations to each other; in other words, a remedy which will cure one case of post-partum hæmorrhage, may be useless, or injurious in another. We have just seen that the chief, and by far the most common, cause of post-partum hæmorrhage is uterine inertia. Let us now try to determine what shall be the treatment. Let me suppose a case of hæmorrhage occurring after the complete evacuation of the uterus, where the blood is escaping from the torn utero-placental orifices, because the uterine muscle refuses to shrink sufficiently to obliterate the blood-vessels, and in this way, and in this way alone, *safely* to stop the flow. The indications evidently are to make the uterus contract, and here comes in those milder expedients, well known to us all, where a knowledge of the "nervi motor" functions of the uterus, so clearly and ably set forth by the late Dr. Tyler Smith, enables us, in most cases, to apply prompt and efficient remedies. Here comes in the use of ergot and other

internal remedies to cause uterine contraction; abdominal friction or pressure; the irritation of the vagina, of the os and cervix uteri, or of the cavity of the organ by the hand; the application of cold in various ways; the application of heat by the injection of hot water; the excitement of reflex contractions of the uterus by the irritation of distant organs, as the mammary glands, or the stomach; the use of nervous and cerebral stimuli, as opium, ammonia, capsicum, and oil of turpentine. I pass by all of these remedies, since I am sure their efficiency, and what is equally important, their relative value is thoroughly appreciated by us all. And I present a case where the hæmorrhage has failed to be controlled by the use of any or all of these milder expedients; where the symptoms are most urgent, and where we realize that, if the flow continue much longer, a fatal termination is inevitable. What is to be done? Let us fairly comprehend the condition of our patient. The uterus refuses to contract; the many stimuli which we have employed to arouse it to activity have proved powerless. It is evident that if our milder remedies have failed, we must employ more active ones; it is evident that if we can not make the uterus contract the woman will die. This sluggish, this inert, this paralyzed uterus must be awakened to activity by some powerful stimulant, and that instantly, or all remedies will be useless. What shall this new and powerful stimulus be? Many have been suggested, which shall we select? What is most desirable is a remedy that can be easily obtained, under all circumstances; one that admits of application in the simplest and most speedy manner; a remedy efficient as an irritant to stimulate the most sluggish and inert uterus to instant contraction, in other words, capable of speedily curing the hæmorrhage; but at the same time, a remedy the use of which shall not be followed by any injurious or dangerous consequences. As I have just remarked, many remedies have been suggested. A remedy that can always be obtained, one that can be applied without the slightest difficulty, one that will be certain to excite sufficient irritation to cause the most inert organ instantly to contract, is the actual cautery. A common poker would answer, a horn or

bone speculum would protect the walls of the vagina, while the irritation caused by the application of the heated metal to the inner surface of the uterus, would, I have no doubt, though I have never resorted to this remedy, occasion an instant shrinking of the most relaxed uterus ever presented to the anxious practitioner. And this remedy, so certain to excite intense uterine irritation, so certain to cure the most obstinate hæmorrhage, must not be used, not because it is not a good cure for post-partum hæmorrhage, but because the woman would, in all probability, die from its subsequent effects. Here then, is a most efficient remedy; but, unfortunately, a most dangerous one.

The next remedy I will discuss is the injection of the solutions of the persalts of iron into the cavity of the uterus. Of the efficiency of this remedy there is no doubt. The irritation it excites causes instant shrinking of the uterus, while the potent styptic effect of the astringent solution on the lining membrane of the bleeding womb, and on the gaping utero-placental orifices, is also valuable in arresting the flow. The application then of the persalts of iron in cases of post-partum hæmorrhage, like the application of the red-hot poker, is certain to cure the hæmorrhage, unfortunately, however, it sometimes resembles the red-hot poker in its subsequent effects, and the experience of the last few years, I think, has proved that women will die, though they did not lose a teaspoonful of blood after the application of the styptic solution—that women will die, sometimes, solely in consequence of the use of the persalts of iron as a cure for post-partum hæmorrhage.

In endeavoring, however, justly to estimate the value of the ferric salts as remedies for post-partum hæmorrhage, we must bear in mind that their use is sometimes as harmless as it is potent, and therefore, that there are certain kinds of cases, to which I shall presently refer, where they are farily to be looked upon as the remedies to save the life of the patient. Injections of tincture of iodine have been urged as the certain remedy for post-partum hæmorrhage. Undoubtedly, the tincture of iodine is excellent in uterine inertia; its use excites sufficient irritation to produce instant shrinking of the relaxed

uterus, and, at the same time, the iodine does not occasion the formation of those hard and adhering coagula which have proved so dangerous after the injection of the solution of the persalts of iron; which have proved, as I firmly believe, the cause of death, in many cases from embolism, from septicemia, or from the development of inflammatory affections of the uterus, or of the adjoining structures. The tincture of iodine is also admirable as an antiseptic. Though I have not made use of the tincture of iodine, I nevertheless esteem it, and might, perhaps, resort to it had the remedy I am about to suggest ever failed me. A difficulty, however, attaches to the use of this remedy in any case of sudden and unexpected emergency—and that is, that unless the medical attendant should have it with him, his patient may die from want of it, or some other remedy must be applied.

This brings me to the discussion of the agent to which I wish to call the attention of the Fellows of this Society as the remedy for post-partum hæmorrhage, occurring under the conditions I have laid down, and in cases when the ordinary remedies of friction, pressure, ergot, cold, etc., etc., have failed. This remedy is common vinegar. I claim no originality in suggesting it. I will merely state that I have used it, alone, as my last resort, both in hospital and private practice, in many (apparently desperate) cases of post-partum hæmorrhage, and invariably with successful results. I have taught the use of vinegar to my classes since 1854, and though I am in constant receipt of reports of cases from my former pupils in which they have relied on vinegar—often, in seemingly hopeless conditions—in all these years I have received the report of but one case where the remedy failed to check the hæmorrhage. In this instance, my friend happened to have access to a galvanic battery, and the electrical current at last proved the needed stimulant to secure uterine contraction.

Vinegar I have found not only a certain remedy for post-partum hæmorrhage, but a remedy as safe as it is certain to cure. In the many very bad cases where I have used it the hæmorrhage was always arrested, and in but one instance did the woman subsequently die, and in this case neither I, nor

the immediate attendant (my friend Prof. John Neill) had any reason to attribute the woman's death (neither did we) to the vinegar I had used to check a most appalling case of flooding. In the many reports which I have received from my former pupils on this subject, I have yet received none where any unfortunate results have followed the application of vinegar.

Vinegar presents the following advantages as an invaluable remedy in the treatment of obstinate cases of post-partum hæmorrhage, where the difficulty to be overcome is a want of shrinkage in the uterine muscle. In the first place, it can always be easily obtained—every household, even the humblest, having a vinegar cruet. In the second place, it can be applied instantly and without any apparatus. In the third place, it always cures the hæmorrhage, or rather, I should say, it has never failed to do so in my practice. It is sufficiently irritating to excite the most benumbed and sluggish uterus to contract, while, at the same time, it is not so irritating that its subsequent effects are injurious. Fourthly, it is an admirable antiseptic. Professor Zweifel, of Erlangen, in his recent paper on the prevention of puerperal fever, considers vinegar an excellent substitute for carbolic or salicylic acids.* Fifthly, it acts on the lining membrane of the uterus, and on the gaping orifices of the torn utero-placental vessels as a valuable astringent. Vinegar I suggest, then, to the Fellows of this Society, as a valuable remedy in post-partum hæmorrhage depending on inertia, possessing the advantage of the solutions of persalts of iron, of the tincture of iodine, and, may I not add, even all the advantages of the actual cautery; while its use is attended by none of the difficulties and followed by none of the dangers that attach to these remedies.

I have just stated that vinegar may be applied instantly and without apparatus—perhaps I should mention precisely my method of using it. I pour a few tablespoonfuls into a vessel, dip into it some clean rag or a clean pocket handkerchief. I then carry the saturated rag with my hand into the cavity of the uterus and squeeze it; the effect of the vinegar flowing over the sides of the cavity of the uterus and through the va-

* Monthly Abstract of Medical Science, June, 1878.

gina is magical. The relaxed and flabby uterine muscle instantly responds. The organ at once assumes, what I will term, its gizzard-like feel, shrinking down upon and compressing the operating hand, and in the vast majority of cases all hæmorrhage ceases instantly; should one application of vinegar fail to secure sufficient contraction, the hand can be withdrawn, and a second or even a third application can be made, until the uterus shall contract sufficiently to stop the flow of blood.

Had I time, it would have been desirable to discuss this interesting subject at greater length and more completely. Thus, it may be asked, suppose you should meet with a case of hæmorrhage where vinegar failed to excite sufficient uterine irritation, and consequently failed to arrest the flooding—what should be done? My reply is, that while such a case is supposable, it is extremely improbable. *I* have *never* met with one, and but one has been reported to me. My treatment, however, in a case where vinegar failed, would be at once to resort to the application of the solution of the persalts of iron. I should do so too with confidence that the remedy would stop the hæmorrhage, but at the same time, I should consider my patient placed in great additional danger by the use of my cure and I would employ it only on the ground that desperate diseases justify the employment of heroic measures. If this view be accepted, we are to consider the persalts of iron as the last and extreme remedy to be resorted to in case of flooding; never to be used save in those cases of uterine inertia where the simpler and safer remedy of vinegar has failed; and, inasmuch as vinegar seldom or never fails to cure uterine inertia, the persalts of iron are seldom or never to be employed in its treatment.

It would have been satisfactory to complete this subject; and to discuss the treatment not merely of the hæmorrhage when caused by uterine inertia, but when due to some of the other causes to which I have referred. My time, however, has expired. When post-partum hæmorrhage is caused by other conditions, necessarily other remedies are demanded. Thus in retained or adherent placenta, the removal of the placental mass is essential. In cases of hæmorrhage caused by

uterine fibroids or polypi, I have found vinegar entirely satisfactory. I have had similar good results when I have used vinegar to check a flooding following a labor complicated by extensive cancerous degeneration. In the hæmorrhage due to lacerations, styptics, ligatures, compression at times are useful, and, in such kinds of cases, the ferric salts may be indispensable. In the hæmorrhage caused by over-exertion or emotion, I have found opium, revulsives, ergot, and the local application of astringents the most efficient agents.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

White Sulphur Springs, Greenbrier Co., W. Va.

As the season at these springs commenced on the first of June, it will be interesting to many readers to be regularly informed as to all which takes place at this, the grandest of all the watering places in America. No one who has ever seen this spot can doubt this, so far as refers simply to its physical beauties, its scenery, its romantic walks, and its indescribably elastic atmosphere; but when added to these attractions, one enjoys the charms of the society which for a half century has made the spot famous, it is simply the truth and not an exaggeration of it, that this is the grandest of all the watering places in this country. One can not approach this subject without appreciating the fact that there is about every watering place its distinct individuality. Saratoga has become the great arena in which fashion annually seeks to display its frivolities and its follies, the visitor there rarely seeing those grand characters, male and female, who go to make up all that is noble and exalted among the American people. The gaudiest equipage, the costliest diamonds aud the most expensive costumes, form the chief object of care and admiration among those who flock to that celebrated watering place. Newport and Long Branch, attractive in their early history for the simplicity of life there, for the purity of their climate, and for all of those surroundings which reinvigorate and charm the visitor, have in recent years become a vast

vanity fair, where the chief object of each "guest" seems to be to rival his or her neighbor in repulsive displays of that unlettered wealth and opulence, destitute of all culture and refinement. Sharon, the Catskill, and Atlantic City, and a hundred of the small watering places in this country have also their peculiar characteristics, but the details of description are omitted, as the purpose of this allusion is to call attention to the peculiar fact of individuality in watering places, and not to weary the reader with needless illustrations.

INDIVIDUALITY OF WHITE SULPHUR.

The individuality of the White Sulphur Springs is so very marked as to constitute one of its chief charms, and to omit any reference to this would be like writing of Shakespeare's immortal creation of "Hamlet" and omitting all reference to the Prince of Denmark. What then constitutes the individuality of White Sulphur Springs? Apart from all that nature has accomplished for the spot, in her varied manifestations of mountain and river and forest growth and matchless verdure, its vast contiguity of shade, and the charms which sunshine so seldom in summer presents—apart from the glorious mineral waters, unrivaled in their effect on either continent—the individuality of the spot as a place of resort will be found to a certain extent in the cottage system, which gives that architectural and social attraction so universally acknowledged, but chiefly in the peculiarity of the society which is annually here collected, and so thoroughly enjoyed. It is here that the great minds of America congregate; it is here that beauty and all of the varied accomplishments that give charm to the female sex are found in the purest simplicity. It is here that the giants in war, in state and national polity, in the professions, in finance, and in all the varied avocations of life, are to be seen in close and familiar proximity. It is here that greatness throws aside for a time the shackles of stately dignity—that peculiar reserve inseparable in daily life from exalted position. It is here that men, occupying the highest positions in civilized life, forget all the hedges that environ station for the pleasure of meeting in simple intercourse their fellow man. It is here that fashion lays aside its follies, and

all that is pure and noble in woman may be so fully enjoyed without the detractions elsewhere appertaining to the garniture of dress. Here may be found those women who have given individuality to Southern life in Southern society, and here in recent years have come those of their sex who represent the higher and better elements in Northern and Western society. It is here that all these charms are to be found commingled—charms that are to be found nowhere else in the watering places of the world.

UP THE RIVER.

Our party left Louisville on the steamer United States. To Mr. Will S. Hays, the ticket agent of the Louisville and Cincinnati steamers, we were indebted for many courtesies, and he is heartily to be commended to all travelers journeying in this direction. To Captain Carter, the superintendent of the line, we were also indebted for much attention, and to Captain David, commander of the "United States," our party owes sincere thanks for his unremitting care for our comfort. This line consists of the "United States" and the "General Lytle," which leave Louisville and Cincinnati on alternate days: leaving Louisville at 3 P. M. and Cincinnati at 5 P. M. They each reach the port of destination early in the following morning. These steamers are models of luxury and convenience. The fare, the furnishing and the state-room appointments are all that could be desired. By the unremitting attention of the officers and their subordinates the comfort of passengers is rendered complete. These facts are of interest to every reader, but especially to those who are invalids and who are seeking quiet and ease in transportation. After a luxurious supper and delightful sail of the Ohio we arrived safely in Cincinnati "on time." About sunset the famous steamer "Morgan," a New Orleans and Cincinnati passenger steamer, made her appearance in our wake and seemed to challenge us for a race. This famous boat was easily beaten by our own, though the "States" was running under a "low head of steam" and carrying a very heavy freight. Some idea of the speed of this boat may be obtained when it is stated that she made under such circumstances and without

effort fifteen miles per hour. When running down stream the "United States" has attained a speed of twenty miles per hour. Her triumphs in this respect are to be attributed to the excellence of her build and the power of her engines, for all of which Louisville artisans deserve especial commendation. All can then recommend these steamers without reserve. One evening on the boat was rendered delightful by the genial society of Mr. and Mrs. Atmore and their bright young family. At Cincinnati we were indebted for special courtesies to Mr. S. T. De Ford and W. P. Walker, general agents there for the Chesapeake and Ohio Railroad.

TOWARD THE HEADWATERS.

Embarking in the afternoon on the "Fleetwood," Captain Campbell commanding, we enjoyed during the afternoon a delightful sail still further up the Ohio. The most unobservant could not fail to notice the rapid and wonderful changes in the aspects of the river. At times in looking forward, the stream would appear to come to an abrupt termination, so sharp are its curves, but when arriving at such a point another reach, even more beautiful, would be presented to the admiring passengers.

At times, granite bluffs rise from the banks of the river, towering from eighty to a hundred feet aloft, their rugged and diversified sides, covered with forest growth clinging majestically, as it were, to their surface; covered with verdure and with flowers. At such points, frequently presented, the opposite side of the stream would always offer to the view alluvial plains, converted by the inhabitants into pleasing meadow-lands, the soft, quiet beauty of the spot contrasting welcomely with the granite bluffs on the opposite bank. Such pictures of magical and fairy beauty are presented to the eye of the traveler during the afternoon. and when the evening sets in these pictures, rendered even more attractive in their salient points loom out in the gloaming. Long after nightfall passengers will be found sitting out on the decks still enjoying what can be seen under the quiet star-light, and loath to leave such scenes of absolute beauty. But with all there comes a time for retiring to rest, and quiet slumber

during the peaceful hours of the night terminates only to usher in the beautiful approaches of Huntington, the end of the water journey.

A BAD CONNECTION.

It is to be regretted that when the water is low, or the fogs on the river are dense, these boats fail to make connection with the trains on the Chesapeake and Ohio railroad. This great obstacle to the entire success of these steamers as passenger boats, and to the Chesapeake and Ohio railroad as a favorite through route to the traveler, it is pleasing to know, will be soon overcome by the completion of the railroad connecting Huntington in West Virginia, with Mount Sterling in Kentucky. Our party were barely successful (to use American phraseology) "in making connection," for within five minutes after securing seats in the train we moved forward to our place of destination.

THE SCENERY.

It is safe to say that the scenery presented along the line of this road will compare favorably with the most beautiful in the world; and it is equally safe to say that the scenery presented is grander and more beautiful than that to be found on any railroad on this continent. Running, as the road does, along the valley of the Kanawha and its tributaries, there is presented in rapid and wonderful succession the wildest and most sublime mountain scenery, alternating with foaming rapids and numerous waterfalls. It is but seldom that these streams are out of sight of the traveler, and it is but seldom that, in themselves and the mountains or meadows contiguous to them, all of the elements which go to make up the most perfect scenery are absent from the eyes of those privileged to look upon such scenes. Indeed, so wonderful is this scenery that though this road has been recently opened, very much of it has been represented on the canvas of our best American masters, and copied from these, on wood, to serve as illustrations for our best periodicals. If such a letter is to be useful to the reader, one of its chief objects should be the furnishing of valuable information; so, instead of hurrying on to the description of what is so early

in the season to be seen at the White Sulphur, facts of value will be chiefly given.

THE CHESAPEAKE AND OHIO RAILROAD

Forms the great highway to the following named springs: The White Sulphur Springs, the Warm, the Hot, and the Healing; the Rockbridge and Jordan Alum; the Sweet and Sweet Chalybeate; the Red Sulphur, the Salt Sulphur, the Cold Sulphur, and Daggers Springs; the Rockbridge Baths, the Bath Alum, the Stribbling, the Millboro and the Wallawhatoola: the Crawford Springs, the Variety and Mountain Top House, with other places of comparatively minor interest. The Chesapeake and Ohio Railway presents, therefore, one of the most attractive routes for the tourist, and must, as soon as the Mt. Sterling and Huntington road is completed, become the great highway for those traveling from the western and middle sections of the United States toward the seaboard. It must become the great route for the invalid, presenting the best appliances for ease and comfort in transportation, pure air, healthy localities, for rest, and the greatest variety of mineral waters to be found in the world. It must become no less the favorite route for the sportsman, offering the best hunting and fishing grounds to be found in this country. The industrious hunter will find ample opportunity for shooting deer, bear, wild duck and turkeys, woodcock, quail and snipe; while in the mountain streams the angler may secure the best mountain trout, bass, pike, pickerel, etc. This route will also become the favorite for business men, as it is the shortest line between the Atlantic seaboard and the great valleys of the Ohio and Mississippi rivers, passing the grand mountain barriers intervening with gentler curves and easier grades than are to be found on any other road running from the seaboard westward. Near many of the stations are to be found country residences in pleasant localities, where the benefits of the mountain air and scenery and the beautiful grounds can be obtained at rates within the means of those who can not afford the expenses at the principal springs and large hotels. To those with large families these country homes will be found especially welcome and valuable, and the time is not

far distant when alongside of their hospitable hearths will be found the representatives of most of the surrounding States.

EFFECT OF SCENERY UPON NATIONALITIES.

When one has looked upon the Kanawha falls, upon Miller's Ferry as seen from the Hawk's Nest, Griffith's Knob and the beautiful Cow Pasture river, upon the Beaver Dam falls and the Big Dowdy falls, and the Hawk's Nest from Bowlder Point, upon Jerry's Run, upon the towering masses of granite at Clifton Forge, and many other scenes in the Allegheny and Blue Ridge mountains, traversed by this road, and already to be seen in miniature in the chief painting galleries and best magazines in this country, he can not but wonder what is to be the effect upon the future dwellers amid this beautiful and sublime scenery. For, surely, no one can fail to observe the effect of scenery upon the nationalities of the world. No one can fail to believe, when analyzing the elevated symplicity, the pure patriotism, the bravery and agility of the Swiss mountaineer, that all of these characteristics are due to the sublime scenery amid which he has had his birth and being; for certainly they can not be due to inherited causes. Still less can one believe that the phlegmatic Hollander, spending his life in quiet torpor with the beer barrel and the pipe, is to be charged with inherited vice; rather are all of these peculiarities of his peculiar nation to be attributed to the monotonous alluvial plains amid which they pass their lives, with nothing to invigorate them, nothing to stimulate them to the performance of deeds which make nations great. So the reckless inertia of the Venetian, as he sleeps away the precious hours of life in his gondola, is attributable not to inheritance, but to the sluggish streams on the bosom of which he is called upon to drone away his existence. How much does Scotland, in her justly proud cherishment of her great men, living and dead, owe to her mountains, her sublime and invigorating scenery? If, then, so much of the greatness of nations is to be found in the mountain altitu des and bracing atmospheres amidst which their people dwell, and if so much that is debasing in the lives of other nationalities, resident in monotonous plains and alluvial valleys, is

to be attributed to geographical and not to inherited causes, the moralist and the philosopher, as well as the physician, may well ask what is to be the effect of summer indwelling upon those who seek the sublime altitudes and the invigorating atmospheres of the Allegheny and the Blue Ridge. And if the surroundings and the effects of mountain scenery and mountain atmosphere give to nationalities their grandest and most exalted attributes, how self-evident it is that each palid invalid, exhausted by disease as well as by the means used to combat it, should in his own person find strength and power through the enjoyment of scenery and atmospheres which have made nations powerful and great! How easy it is to see illustrated in the single individual the results which history recognizes as manifested in the mass. How easy is it to understand that, amidst the celebrated watering places of Virginia, located amid her mountains, the worn and exhausted invalid should find strength and health again. And with the magic waters of White Sulphur Springs, and the elastic and invigorating atmosphere surrounding them, how few of the sick of this country are there who may not find here the hygienic Mecca which they have in vain so industriously sought elsewhere. How few there are who could not find here the means of restoration and recovery.

E. S. GAILLARD.

HICKORY CREEK, ARK., June 15, 1879.

Dr. E. S. Gaillard:

DEAR SIR—On Friday morning, April 18th, I was sent for to visit Mrs. S., aged 22, and married about twelve months, but not being at home, another physician was called. At 2 A. M. Saturday, I saw her and learned that about sunrise, she being eight months advanced in pregnancy, had a "fit," falling on her back. Until within three weeks of said occurrence, she had been the very personification of a healthy country woman, but during this time she had been "bloating;" feet and legs swelling during day, and eyes at night. At no time did she suffer a moment from nausea; her bowels as regular as clock work, until the morning of the 18th, when she purged very freely.

The physician called, and, without using any anæsthetic to control the convulsions which she had had uninteruptedly from the first, delivered her at about 11 A. M., with instruments, of a still-born, male child; the convulsions then ceasing. He left no medicine, (save two doses cinchonidia, to be given if she became conscious), saying it was useless to attempt anything further as she would certainly die.

I found her insensible; pupils dilated, moaning, sighing respirations, pulse 140 and full, womb not well contracted, though not flooding seriously, very restless, rolling head from side to side, skin rather cool to hands (I had no thermometer). At 3 A. M. I extracted sixteen ounces of blood from right arm and gave 20 grains calomel and 3 grains podophyllin, and repeated same in half hour. After swallowing the first, gave 20 grains hydrate chloral within fifteen minutes of the first potion of calomel, and repeated same every two hours, or *pro re rata*. At 6 A. M. no change worthy of notice; introduced catheter and emptied the bladder of an immense quantity of urine, of which I made no examination. At 4 P. M., if any change, for worse; pulse 140 and intermittent respirations 30; applied mustard to spine and soles of feet. At 6 P. M., bowels moved freely, several times, urinary organs acting copiously. Patient remained in about same condition until Sunday at 10 A. M., when in my absence —having used all the chloral that I had with me I substituted brom. potash—she commenced to have convulsions again and had thirteen before I arrived at 1 P. M., and had two more before I could control them with chloroform. During the remaining part of the day and night they were restrained by a few inhalations, whenever the symptoms manifested themselves. Monday, pulse 130, A. M., to 126, P. M., respiration 28 to 26, patient conscious at times, but owing to paralysis of vocal organs, (left side also partially so), she could not speak; treatment chloral and opium. Tuesday, pulse 124 to 120, respiration 25 to 22; could articulate one syllable and would occasionally recognize her mother and husband while they conversed with her; treatment same, with 20 grs. quinine. Wednesday, 9 A. M., thirst very great, calls for

water; no tympany, pulse 96, respiration 20; 3 P. M., pulse 100, respiration 22, skin warm; treatment same, with 5 grs. quinine and 3 grs. Dover's powder every four hours. Thursday, pulse 84, soft and good, respiration 18; very thirsty; turpentine stupes to abdomen; treatment opium and quinine every six hours. Friday, pulse 82, respiration normal, urinary organs acting freely, bowels not moved since Monday; ordered castor oil and turpentine; treatment same, with nourishment; patient rational, recognizes visitors, etc., and asks frequently about things of the household, etc. Saturday, bowels acted four times yesterday and night without oil; patient not so well, rather stupid, some tympany; pulse, 9 A. M. 88, 1 P. M. 94, thirst very great, bed sores on hips; treatment, opium and quinine and turpentine every six hours. Sunday, pulse 98, bowels moved twice or three times yesterday eve and night, some tympany, very restless, no sleep, jumping and jurking when dozing or has eyes closed, attributed to opium; treatment continued with 15 grs. hydrate chloral, *pro re rata*. Monday, pulse 86, bowels moved once last night, tongue a little white, slept well and sweated freely during night; treatment same. Wednesday, pulse 80, patient cheerful, appetite improving; ordered quinine and wine three times a day and patient discharged.

Yours truly, A. L. PURDOM.

CHEMISTRY AND PHARMACY.

"Diruit ædificat, mutat."—HOR.

CONDUCTED BY C. W. NULL, M. D., LOUISVILLE, KY.

INSECT POWDER.—The insect powders of commerce are the powdered flowers of different species of *Pyrethrum*. Those of *Pyrethrum carneum* and *roseum* were introduced some thirty years ago under the name of Persian insect powder, and subsequently those of *Pyrethrum cinerariæfolium*, a native of Dalmatia, Austria, as Dalmatian insect powder. Both the Persian and Dalmatian powders are good insecticides, but the latter is much the more energetic in its action

and hence commands a higher price; indeed, it is so much preferred that it is gradually driving the so-called Persian powder out of the market. The fact of the flowers of *Pyrethrum roseum* being less active than those of *Pyrethrum cinerariæfolium*, has been accounted for on the ground that the single flowers are much more powerful than the double ones, and that the double flowers occur in the *Pyrethrum roseum* in much larger proportion than in the other species. The flowers, either whole or powdered, preserve their activity for a long period. A recent European experimenter states that he could not perceive any particular loss of activity in samples which had been kept for six years. The fresh (undried) flowers act very slowly as compared with the same dried and powdered, and the plant itself powdered is quite inactive. It is singular that while there are many other composite plants closely related to the genus *Pyrethrum*, as yet this peculiar property has been found only in plants belonging to this genus, and even within this limit there are several species whose value as insecticides is very slight. A large number of *Compositæ* indigenous to Austria have been tested and found to be of no value in this respect. The flowers of Tansy (*Tanacetum vulgare*) are said to have a slight stupefying effect. The *Pyrethrums* are hardy plants which bloom abundantly the second year from seed. The powder is prepared from the half-opened flowers gathered during dry weather, and dried in the shade under cover; but the process of gathering, drying and preparing involves so much time, their culture can only be made profitable where labor is cheap. Insect powders have not attracted general attention as insecticides until within the last three or four years, during which time they have been introduced in various forms in packages and boxes, accompanied by suitable blowers or insect guns for the purpose of properly distributing the powder, and recommended for the destruction of flies, cockroaches, fleas, bugs, etc. Sometimes these prepared articles have been artificially colored so as to disguise their source, but all have owed their activity solely to the presence of the powdered flowers of one or other of these *Pyrethrums*.

House flies are very sensitive to the effects of these powders. A few puffs of the dust from an insect gun blown into the air of a room with the doors closed, the discharges directed toward those parts where flies are congregated, will stupefy and kill them within a very short time. The powder is somewhat pungent, and to breathe an atmosphere charged with it will frequently cause a slight sneezing, but beyond this the operator need not anticipate any annoyance. Frequently during the past summer, when flies have been troublesome, we have pretty thoroughly charged the air in our dining-room and kitchen at night, closing the doors, and in the morning found all or nearly all the flies lying dead on the floors. A few minutes after its use they begin to drop on their backs, and after a very short time die; if a room be closed for half an hour after using the powder, few, if any, will escape. By some this energetic action has been attributed to the presence of a volatile oil in the flowers; by other and later investigators to a peculiar crystalline principle believed to be an alkaloid; but this point does not as yet seem to be fully settled. More recently we have been experimenting with this powder on the green aphis that troubles our green-house plants. The usual plan of smoking with tobacco is an unpleasant remedy, and is also very injurious to many plants of delicate constitution, whereas the insect powder used to any extent is perfectly harmless to plant life. After freely charging the air of a green-house with the powder, blowing it in fine clouds of dust among the plants, the tiny tormentors who are busily engaged in sucking the life out of the leaves and tender shoots, soon manifest symptoms of uneasiness and begin to drop from the plants to the ground, and in the course of an hour or two the larger portion of the enemy's forces will be found lying sprawling on the earth in the pots or on the shelves and floor of the house, where, probably partly from the stupefying effects of the powder and partly from their natural inability to find their way to any given point, they fail to reach the plant again, and hence perish. By applying the powder freely in the evening and giving the plants a thorough syringing in the

morning, they may in the worst cases be almost freed from aphides by a single application; it is better, however, to repeat its use the next evening so as to make sure work. The powder does not appear to kill this aphis as it does the flies. For the purpose of testing this point we placed a number of them in an open glass cell of a microscope slide, and powdered them thoroughly, and found some of them alive after two days of such severe exposure to its influence. Having recently found a plant literally swarming with the green aphis so that the sight of it was almost disgusting, we submitted it to the action of this powder one afternoon, having previously spread a large piece of white paper under the plant so that the effect of the powder on the insects might be distinctly seen. Almost immediately they began to fall on the paper, and in less than ten minutes a hundred or more of them were lying on their backs or crawling sluggishly about. In the course of half an hour some four or five hundred had fallen on the paper, and when the plant was examined again on the following morning there remained but very few on it, and most of these were removed by a slight syringing. We have had the powder used in green-houses by some of our friends, who also report its success. The matter is well worthy the attention of all those who indulge in window gardening or who grow plants in small conservatories attached to dwellings, since if this prove an efficient and economical substitute for tobacco smoke, it will save much annoyance and some loss. Success will necessarily depend on the quality of the material used, but after the experiments we have tried we feel confident that with good Dalmatian powder there need be no failure. It will be interesting to learn, as opportunity offers, how moths and other insects will be affected by the use of insect powders. If the beautiful specimens which sometimes fly into our rooms at night can be drugged in this way and captured without a struggle, we may add many a perfect specimen to our collections, which would otherwise be more or less defaced. There is quite a field for experiment here.—*William Saunders in Canadian Entomologist.*

Salicylate of Soda in Rheumatism.—The following are the conclusions by Marrot (*Archives Generales de Medecine*, February), as to the action of salicylate of soda in rheumatism: (1) During the course of acute articular rheumatism, there is a notable diminution in the quantity of urine, the proportion of uric acid increasing, and this increase is not explained by the lessened urine—it is an absolute increase. (2) In cases of acute articular rheumatism left without treatment, the cure is characterized by a notable increase, during some days, of the quantity of urine, and by the return of uric acid and of the urea to the normal proportion. (3) Salicylate of soda given early in acute articular rheumatism in some way hastens this natural crisis. One or two days after its administration the urine becomes very abundant, clear and of slight density. There is a relative polyuria; the quantity of uric acid and of urea is much lessened. It is an interesting fact that these modifications of the urine occur independently of any change in the temperature. (4) In the cases of chronic articular rheumatism, the quantity of uric acid and of urea is rather diminished. Here the salicylate of soda has no useful result. If a patient with chronic rheumatism be subjected to hot baths, the quantity of uric acid contained in the urine is notably increased. Hence, as Prof. Lasègue has shown, such baths are exceedingly useful in chronic rheumatism. (5) The salicylate of soda, as well as the hot bath, does not increase the *aglobulie* peculiar to chronic and acute articular rheumatism. (6) During the course of either acute or chronic articular rheumatism, the quantity of phosphoric acid is lessened, and so remains whatever treatment may be employed.

Cockroach Poison.—Equal parts of powdered borax, Persian insect powder, and powered colocynth, well mixed together, and thrown about such spots as are infested with these troublesome insects, will prove an effectual means of getting rid of the scourge. This powder, in all cases where its use has been persistent, has by long experience been found an infallible remedy.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Index damnatur cum nocens absolvitus."

A Review and Criticism on the Transactions of the Dental Association of Maryland and District of Columbia, for the year 1878—Anœsthesia and Anœsthetics.—Address by Dr. JOHN J. CALDWELL, Baltimore. By Dr. M. P. SCOTT, Baltimore.

I have read with much pleasure Dr. Caldwell's address, and received much instruction. It is a well considered and thoughtful resumé of the subject of anæsthetics to the present time. Not only has he presented the views of the ablest writers on the subject, but has added his own comments on their physiological action, which, if my esteemed brother will permit me to say, are worthy to rank with the best. He justly gives the first rank to chloroform in all operations, except those in dental surgery which require the sitting posture. In such cases nitrous oxide gas is preferable. Chloroform is better than ether or any of its mixtures. Chloroform is king. In the chain of criticism we avail ourselves of the privilege and speak *ex cathedra.*

The mode of administration is dwelt upon at sufficient length, where he says the patient must be recumbent, the stomach empty, and sufficient amount of atmospheric air admitted along with the agent. We are sorry he did not condemn in stronger language the pernicious and dangerous practice of overpowering the patient at once with a large quantity of chloroform; better garotte to insensibility and proceed with the operation.

The precautions against swallowing the tongue, (a kind of *felo dese*), are made sufficiently prominent, as well as the physiological condition upon which the accident supervenes. It is regretted that he did not analyze with sufficient exhaustiveness (excuse the word) the causes of death, as by coma, asphyxia and the like, as in that event he would have traced, with but few exceptions, death to failure to admit atmospheric air in sufficient quantities.

I have administered chloroform many hundred times, have

witnessed its administration in the hospitals of Paris, in the field and in hospitals during the late civil war, and have yet to see the least unpleasantness follow where this precaution has been used.

Two points should be borne in mind: The carbonized condition of the blood, and the specific action of the agent upon the brain and other nerve centers. People vary in susceptibility to its influence. The negro succumbs more readily than the white race, a physiological fact to which I would invite the attention of those who insist upon negro equality.

We take this occasion to say that the views of Dr. Chisholm in reference to the necessity of bringing the patient fully under the influence of chloroform before commencing an operation, to render the reflex motor system insensible as well as the sentient nervous centers, have our hearty concurrence. Shock is thus avoided which we know is so often fatal.

Chloroform has not been considered by the doctor or any of the authors cited, as a therapeutic agent in the treatment of disease. A substance which acts so powerfully upon every part of the nervous system, centric and excentric, must be a most important remedial agent in a large number of diseases, for there is scarcely one in which the nervous system is not more or less concerned. As early as 1856 I used it in treatment of colic with magical effect. During the late war colic was very common among our soldiers returned from Northern prisons. I used it in a number of severe cases, and always with most satisfactory results. It does more than relieve pain temporarily, for in many cases the pain does not recur after the effects of the chloroform have apparently subsided. In passage of calculus from kidney it is emphatically *the remedy*; at least in my hands I have had but little trouble with this affection. I administer by inhalation. I have never used it but once in the cold stage of an intermittent. The patient had been shaking for two hours in a way I never saw any one else shake; black under the eyes; an Arkansas shake; I thought she would die. I gave chloroform (inhalation); the paroxysm ceased instantly; it did not return; a

slight fever followed. I used it on the same person a second time under the same circumstances. On this occasion the shivering and shaking returned. I repeated chloroform ; arrest, recurrence. At the end of about twenty minutes, being under its influence from time to time, the cold stage was arrested. I would suggest the use of chloroform in intermittent and malarial fevers in their outset as a curative agent. Would that some substitute might be discovered for quinine to deprive those harpies of Philadelphia of their blood-money wrung from the sick poor of our country through the instrumentality of an iniquitous tariff.

Chloroform is worthy of a trial in that scourge of the tropics and our Southern country, yellow fever. I suggest it in these cases upon the idea of the same theory of such diseases, the most rational yet put forth of their pathology.

I trust, therefore, that our friend and brother, at some future time will discuss the use of chloroform applied to treatment of diseases. Internally I would suggest it as a remedy for all parasites ; it will kill the bott, so fatal to the horse. We must be permitted to thank the doctor for that part of his address in which he considers the methods to resuscitate from the effects of chloroform. He has given prominence to the use of nitrite of amyl. (See Dabney's). Interesting experiments are cited upon dogs, showing its powerful effects, due, as he believes, to its action on the heart, conclusions which are strengthened by two cases of resuscitation reported by Dr. R. W. Nelson, of Virginia. It is worthy of remark that of the four dogs experimented upon, the only one not revived by the nitrite of amyl, was the one to whom chloroform had been given *unmixed with atmospheric air.*

Artificial respiration is also recommended. Dr. Cutter, of Boston, has furnished what has been so much needed, a simple, mechanical contrivance to pump air or oxygen into the lungs and pump it out. "To pump air in and out of the body without any pressure on the chest, to breathe life into persons."

But I would ask especial attention to that part of Dr. C.'s essay which treats of the application of Faradaiac electricity.

Some of the experiments cited upon the pneumogastric nerve after its division, in which electricity supplied the place of nerve force in digestion, are most interesting. It has long been known that electricity is a powerful nervous stimulant, but here we have the fact arrived at of identity of nerve-power and electric force. The process of digestion being carried on by substituting a battery for the nerve centres of the pneumogastric nerves.

Such being the case, there can not rest a doubt that in the battery we have the most powerful and efficient means of restoring persons to life when every other known agent would fail. As merely an aid, a stimulant, its powerful effects are recognized, but if, indeed, the subtle agent we call electricity be the same as nerve force, we shall have attained a point in physiology which may enable us to unravel the problem of life. Setting aside all that our confrere has said in regard to chloroform, its physiological action, its mode of administration, etc., the means of restoration from its pernicious effects, we regard his suggestion of electricity as the most potent remedy, as opening a new field for its application as a therapeutic agent in the treatment of disease. We trust that Dr. Caldwell will again give us the benefit of his experience and reflection upon Faradaiac electricity.

In conclusion we would recommend all who desire in brief to review the subject of anæsthetics to consult Dr. Caldwell's admirable resumé of the subject, as set forth in the transactions of the Dental Association of the State of Maryland and District of Columbia, for the year 1878.

I can not close my remarks without a word to the dental profession. I am happy to congratulate them upon the great advance and upward progress of the profession of dentistry. Like surgery, it long remained a purely mechanical art. Time was, when surgery was a part of the barber's calling. Time was, when medicine was so low that the priest was inhibited from its practice, although in England, Macauley tells us, they (the priests) sometimes curried the coach-horses and were prohibited from marrying the servant girls. The progress of intellectual development has taken all these high

callings from their menial condition. The priest exercises the noblest profession of the world; he is the minister and interpreter of God's holy word. Next to his is the mission of those who minister to the sick in body. Dentistry must now take its place as a branch of surgery. One of their schools has set us a noble example by which great reform may be effected in medical education, so much needed in these days of medical multiplication: That proficiency, not length of time of study, should be the test demanded for graduation, and that the teachers should never be permitted to examine candidates or grant diplomas.

Naval Hygiene, Human Health, and the Means of Preventing Disease, with Illustrative Incidents, principally derived from Naval experience. By JOSEPH WILSON, M. D., Medical Director United States Navy. Second edition, with Colored Illustrations. Philadelphia: Lindsay & Blakiston. 8vo; cloth; pp. 274.

Dr. Wilson's work on Naval Hygiene was not prepared exclusively for medical men, but for all whose conduct may have influence in the preservation of human health, such as the captains of ships on long voyages, etc. It is consequently not a regular scientific treatise on naval construction in a hygienic point of view, nor is it filled with tables and statistics and impracticable suggestions. On the contrary, the book is a very agreeable and gossiping account of the special features of a sailor's life. The author gives a short introductory chapter on hygiene in general, and then proceeds to the subject of naval hygiene. He begins by describing his introduction to the naval service, and, as appropriate to the occasion, describes an officer's outfit. He then makes a sanitary examination of the ship, tells of receiving the crew, their social influences, food, drink, the sea, etc., and naturally glides into an account of the diseases which afflict the seaman. First among the diseases is sea-sickness, which the author, after Darwin, attributes to nervous derangement produced through the senses by the irregular oscillatory movements of neighboring objects, and states that there is no ef-

fectual remedy, except to get on land. Nostalgia is another disease to which seamen are liable, and the only remedy in severe cases is to send the subject home. The botany and zoology of the tropical countries the ship is expected to visit is described, and an account of the more common fruits and animal food they furnish is mentioned. Then the subjects of liberty on shore, ventilation, quarantine, a battle, endemic and epidemic diseases, prisons, discipline, and rewards and punishments are treated in an agreeable manner, altogether making a very useful and instructive book. The volume is well issued, and there are several fine chromo-lithographs of tropical plants.

Elements of Modern Chemistry. By ADOLPHE WURTZ, Member of the Institute, Honorary Dean and Professor of Chemistry of the Faculty of Medicine of Paris, Member of the Academy of Medicine, etc. Translated and edited with the Approbation of the Author, from the Fourth French Edition, by Wm. H. Greene, M. D., Formerly Demonstrator of Chemistry in Jefferson Medical College, Philadelphia, Member of the American Philosophical Society, of the Chemical Societies of Paris and Berlin, etc. With one hundred and thirty-two illustrations. J. B. Lippincott & Co., Philadelphia. 1879.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

DETECTING FORGERIES.—The Whitaker will case has developed much of evil; now it develops something that is good. Born of the necessity for detecting the forgeries and trickeries attending that will, an instrument was invented by the noted expert, Dr. Charles M. Cresson, intended to reproduce enlarged copies of handwriting. It is a large megascope, and has been successfully used in the examination of altered documents and of altered and counterfeit bank-notes. In legal contests, where the merits of a case depend upon the genuineness of a particular signature or that of an

entire written document, the megascope, though dumb, is capable of giving stronger evidence and more reliable than the most consummate expert that ever took the stand. Placing the genuine and spurious documents side by side in the instrument, after placing the screen before the eyes of the jury, both documents are thrown upon it so that the jury may decide for themselves which is the real and which the fraudulent. The eloquence or ingenuity of counsel can not disturb its story. Although the principle of the megascope is old and well known, the particular arrangement and adaptation of this instrument are entirely new. It differs from those ordinarily made in its large dimensions, in the method of using the light employed for illumination and in the kind of screen used for observation. The peculiar arrangement of the lights and screen enables the examiner to discover the surface of the paper through the ink, so that patching or shading or painting of letters becomes evident the instant it is brought under the focus of the megascope. An arrangement of screens by which the light is cut off alternately from either side of the instrument discovers any tampering with the surface of the paper, either by scratching or washing with chemicals. The instrument is of sufficient capacity to view at once the bank-notes placed side by side, and the pictures are of such fineness that the image is produced without color from chemical aberration or distortion from spherical aberration. A watch placed in the instrument and reflected on a finely-ground glass screen leads the spectator to believe that he has suddenly come in contact with the City Hall clock. The pores of the skin on the cheek or hand are shown with an unpleasantly magnified faithfulness, and to see the face of your dearest friend through the megascope almost moves you to tears under the false impression that he has been riddled with bullets. The reporter handed Dr. Cresson his official card, recently adopted by the press of the city, bearing a fine engraving of Independence Hall, the certificate of the city editor vouching for the identity of the person named on the card as a reporter of the *Record*, together with the signature of the mayor. In a moment a beautiful fac

simile of the card was produced, enlarged sixteen times its size and as perfect as the original. The card suddenly disappeared, and in its place came the head of a lioness, as if enraged at the loss of her whelps, with eyes like burning suns and her hair standing out as if she were stuck full of quills. "Where did you get that?" gasped the reporter, dropping his pencil as the grim image seemed ready to leap through the screen, "Calm yourself, it is the cat," observed the Doctor, who had picked up an inoffensive tabby from the floor and thrust her head in between two glaring calcium lights before the newsman or the surprised feline had received the least intimation of what was about to transpire. It 's a tragic spectacle to see two unhappy songsters of the feline tribe glaring at each other on a back-alley fence on a moonlight night, but a cat under such circumstances fades into insignificance when compared with an exhibition of herself through the megascope. Cartes de visite are enlarged with wonderful effect, and, without losing any light, give a life-like representation of the original, startling in its natural presence. These exhibitions, however marvelous, are perhaps less wonderful than the power of the instrument in detecting forgeries. The forger who can simulate the handwriting of another and escape the test of this powerful instrument in detecting the fraud, would be in himself a miracle. The Doctor placed in the megascope a piece of writing which, to the naked eye or even under a strong magnifying glass, appeared as if each letter was made with simply one stroke of the pen. Instantly the work of the skilled penman in "painting" the letters was laid bare. The ragged edges where the heavy shading began and ended were as plain as the letters themselves. Defects in the paper though ever so slight, by erasure or otherwise, and even the texture of the paper itself, were presented as clear as sunlight. The object to be viewed is firmly fixed upon a sliding screen and is illuminated by two calcium lights placed on either side of the instrument, and so arranged that, by means of compound condensing lenses of five inches diameter, the rays thrown upon the object by one light are reflected by the con-

densers of the opposite light, making it a thorough illumination. There is provided, also, a device by which the rays from a third calcium light can be thrown upon the back and through the object under examination, if the nature of the subject will permit it. The image is projected on the screen by an enormous compound achromatic objective lens of over seven inches in diameter. The screen is made of plate-glass finely ground on one side, and is movable and suspended in a frame by steel tapes and accurately balanced. The frame which carries the screen is placed upon large rollers, and the focusing is done by moving the screen instead of the lens. In order to secure a uniform light the massive blocks of lime upon which the hydro-oxygen flame is thrown are moved by clock work, so as to continually present new points of contact for the flame. In using the apparatus the object to be viewed is laid upon a table in the exact position in which it is desired that it shall be represented upon the screen. A sliding frame is then pressed upon it by springs, and the table with the object on it is slid into place. The megascope introduces itself as the latest and best detective.—*Phil. Rec.*

Dr. William W. Jacques, of the Johns Hopkins University, at Baltimore, has invented a new form of spectorscope, which greatly extends the possibilities of spectroscopic research by allowing the study of the rays emitted by solid and liquid incandescent substances, whereas it has hitherto been confined to gases. It also raises the subject from a qualitative to a quantitative basis by enabling us to measure the relative intensities of all the different physical rays admitted. During the past year Dr. Jacques has made an extensive series of measurements with this instrument of a variety of substances, differing as widely as possible in physical and chemical properties, from which he is enabled to determine the molecular weight of these substances, and to draw some important conclusions as to the structure of the molecules. Dr. Jacques thinks that the similarity of the kinds and intensities of the rays emitted by all substances, and the differences due to differences in the weights of the

molecules, point very strongly to the conclusion that all matter is made up of ultimate particles which are all alike, and that different forms of matter grow out of the differences of arrangement of these ultimate particles in the molecule.—*Baltimore American.*

THE EFFECT OF SMOKING UPON THE TEETH.—At a recent meeting of the Odontological Society of Great Britain, Mr. Hepburn read a paper on this subject; and the results of his investigations on the subject are contrary to what is, we believe, the popular notion. He considers that the direct action of nicotine upon the teeth is decidedly beneficial. The alkalinity of the smoke must necessarily neutralize any acid secretion which may be present in the oral cavity, and the antiseptic property of the nicotine tends to arrest putrefactive changes in carious cavities. In addition he is inclined to believe that the dark deposit on the teeth of some habitual smokers is largely composed of the carbon with which tobacco smoke is impregnated. It is this carbon which is deposited upon the back part of the throat and lining membrane of the bronchial tubes; and with whatever disastrous effect it may act in these situations, he thinks we are justified, from what we know of its antiseptic properties, in concluding that its action upon the teeth must be beneficial. Moreover, this deposit takes place exactly in those positions where caries is most likely to arise, and on those surfaces of the teeth which escape the ordinary cleansing action of the brush. It is found interstitially, in all minute depressions, and filling the fissures on the coronal surfaces. It may be removed with scaling instruments from the surface of the enamel, but where it is deposited on dentine, this structure becomes impregnated and stained. Indeed, it is only where the enamel is faulty and there is access to the dentine, that any true discoloration of the tooth takes place; but it is remarkable, he says, how the stain will penetrate through even minute cracks, provided the necessary attention to cleanliness be not exercised. The staining power of tobacco oil may be seen when a deposit has taken place on the porous

surface of tartar collected on the posterior surface of the inferior incisors. In this situation a shiny, ebony appearance is occasionally produced. That tobacco is capable of allaying, to some extent, the pain of toothache, is he thinks true; its effect being due, not only to its narcotizing power, but also to its direct action upon the exposed nerve; and he is inclined to attribute the fact of the comparatively rare occurrence of toothache among sailors, in a great measure, to their habit of chewing. He has been struck, in the case of one or two confirmed smokers who have come under his notice, by the apparent tendency which exists towards the gradual production of complete necrosis of carious teeth, and the various stages of death of the pulp and death of the periosteum taking place without pain or discomfort to the patient. This condition may, of course, be brought about by a variety of influences; but in these special cases he is inclined to think that the presence of nicotine in the mouth has acted powerfully. The experience of other speakers in the subsequent discussion appeared to corroborate that of Mr. Hepburn, except that Mr. Oakley Coles thought the frequent changes of temperature probably injurious and tending to produce cracking of the enamel, and Mr. Arthur Underwood thought that smoking to the extent of injury to digestion tended to cause recession of the gums and otherwise to injure the nutrition of the teeth.—*Brit. Med. Jour.*

Experiments with Horse Pox.—Some extremely interesting experiments have of late been made by MM. Pingaud, Viseux and Thomas. These gentlemen, having had the opportunity of witnessing an epidemic of horse pox during the month of February last, decided to try what would be the effect of inoculating on man the liquid contained in the pustules. Accordingly M. Pingaud chose a white horse four years of age, which was suffering from horse pox, but whose previous health had been all that could be desired, as the subject that was to furnish the lymph. The cutaneous eruption was discrete in character, consisting in a few pustules covered over by crusts and situated about the shoulder.

But the mucous membrane of the mouth and the posterior surface of the upper lip were covered with a number of pustules with the characteristic pearly look about them. The serous fluid contained in these pustules was carefully collected, and seven young soldiers were inoculated with it. These men had never been vaccinated. Six days after the operation six of them presented small pustules, the basis of each showing very slight signs of inflammation. Four of the six successful cases were made use of to inoculate sixty-four other men, eight of whom had never been vaccinated, with the result of obtaining forty characteristic pustules—in other words, 64 per cent. were attended with success. No inflammatory accidents were met with in any of the cases, and in a few only the pustules exhibited a furunculous aspect. Several calves were also inoculated with the horse pox, and were made use of for secondary vaccination; but in these instances the proportion of successes fell from 64 per cent. to 48. The activity of the lymph had consequently been diminished by passing through the calves. In several instances cited by Tenner, Zoy and Amyot, of Alfort, inoculation with horse pox was followed by more or less serious accidents. M. Pingaud, however, thinks that this result was due to the manner in which they were done. He is careful in taking only the pearly liquid which is contained in the pustules formed on the mucous membrane of the mouth, which is quite harmless; whereas he considers that the saliva, the blood and the liquid taken from the crusts are septic in their nature. It is a significant fact that all the cases in his charge were quite simple in their course, whereas a person who had inoculated himself with the liquid proceeding from a cutaneous pustule was affected with angioleucitis.—*Lancet.*

THE APPLICATION OF JUNOD'S BOOT.—Being desirous of seeing Dr. Junod apply his boot, I visited him one day by appointment in Paris, in January, 1877; he having previously informed me that the apparatus should not be applied for at least three hours after a meal. I was shown into a very small room, which served him as a bedroom, study and consulta-

tion room. After a few minutes, he produced a bag containing the well known brass boot, some india-rubber circular bands, from eight to ten inches deep, and some long narrow strips of the same material, about two inches wide. Dr. Junod proposed to apply the boot to my leg; first covering the foot with the corner of a towel previously warmed, he wrapped the rest of it round the limb to above the knee. I then put my leg and foot into the metalic boot, which had been also warmed before the fire; a band of muslin folded six or eight times, with a little cotton-wool interposed, was applied two or three times round the leg, on a level with the mouth of the boot, which reached to just below the knee; and over the muslin he wound a strip of the narrow India-rubber band. He had previously stretched a wide India-rubber circular band over the mouth of the apparatus, and now slipped its free margin over my knee, and flattened it out so that it reached several inches up the thigh. The India-rubber bands are very thin; and, as an additional precaution, one of the narrow strips was wound two or three times round the limb, overlapping the edge of the circular band. Dr. Junod then screwed the tube of a small air-pump, six or seven inches long and an inch and a half in diameter, to the boot, giving me the pump to work. After about a dozen strokes, a very good vacuum was produced. I felt the pressure chiefly above the upper rim of the foot, but nothing in the foot. The limb was bare with the exception of my sock, which was left on. Dr. Junod now took the air-pump and gave a few strokes from time to time, which I felt at once by the increased pressure. He usually continues the application for an hour, at the end of which time the limb in ordinary cases, is found much swollen in size, with all its soft parts considerably harder to the touch; and twenty-four hours generally elapse before the swelling and hardness entirely disappear. In my case, the boot was only kept on a quarter of an hour; and, notwithstanding this, the leg was decidedly increased in bulk, and felt harder from the ankle upwards, the circumference of the calf being two centimètres greater than that of the other leg. I could see no change in the foot. The leg was uncomfortable, and felt as if it had

been bruised all over, or as if I had greatly overwalked myself with that leg. Dr. Junod's attention was first attracted to this subject when, while still a student, he was called to see a young woman suffering from severe cerebral congestion; and the thought struck him that, by means of atmospheric pressure, blood might be drawn to the extremities to relieve the congestion of the head; he devised the requisite apparatus and the patient was cured. If pain be felt at any moment, the tube of the air-pump must at once be disconnected and the pressure removed. Dr. Junod felt my pulse from time to time, as syncope is sometimes apt to occur. As it was, I felt extremely tired the rest of the day and also next morning. When I called on Dr. Junod, a few days afterwards, he explained that a spare individual like myself was more influenced by an application of the exhausting boot than a plethoric person, who had more blood, and whose circulation was therefore less affected when a certain quantity was detained in one limb. Dr. Junod has an appointment to the Paris hospitals, with an almost nominal salary, and has hardly any private practice, except when he is called in consultation as a last resource. He has succeeded sufficiently often in saving life to justify his faith in his invention. According to him in regular treatment an hour's daily application of the boot is essential.—*Bernard Roth in Brit. Med. Journal.*

The Neglect and the Value of Blistering.—Dr. H. S. Anderson, in his Harveian Discourse, published in the Edinburg *Medical Journal*, says: A remedy which I fear is somewhat unduly neglected now-a-days is counter-irritation by means of blistering; and I think I have observed in some young practitioners an approach to something like terror when blistering is spoken of as a remedy that might frequently be used. Certainly, as regards children's diseases, there is more of this fear than there should be. It has frequently, for example, been my experience to see children, in consultation with a younger practitioner, when blistering in acute head affection had never been dreamed of. In mostly all acute inflammatory affections of the brain, tubercular or not, in child-

ren, I am strongly of opinion that after shaving the head, the application of blistering fluid has a most rapid and satisfactory effect. Inflammatory attacks also of the peritoneum and chest, in children, are often controlled by blistering, although the size of the vesicatory and the length of time applied must be carefully considered. And in the rheumatic affections of the joints, in adults, repeated blistering has often the happiest results. For many chronic conditions, also, counter-irritation has always held a high place in my list of remedies. In chronic tubercular affections of both chest and abdomen, I think occasional and repeated blistering is frequently beneficial, and also in chronic and obscure head and other affections of the nervous system. For example, a blister over the roots of the nerves, in herpes zoster, often relieves the neuralgic pain so generally present, and often so difficult to get rid of. In diphtheritic paralysis, also, blistering the nape of the neck, and even down the spine, often expedites cure in a wonderful way. In the uterine or ovarian pain so often complained of in the left side, there is no better remedy sometimes than a succession of fly-blisters, and the tenderness of the spinal irritation is very frequently relieved, if not got rid of, by the same means. In chronic effusions, the use of blisters is fully acknowledged, and does not, therefore, call for special mention.—*Med. and Surg. Reporter.*

FOUND—A CRITIC!—*Ed. Med. and Surg. Reporter:* In the columns of a recent number of a medical journal there is a request made for a critic, who shall see that all articles are rigidly reviewed, in order that our medical periodicals may contain less "bosh." In the editor's words I find it stated that when once some new treatment is started, the paste pot and scissors transfer the cream of the article from journal to journal, and it is translated into two or three foreign languages, and, perhaps, back again (as he has known) to the original. It is not strange that he should know such instances to occur, since this identical thing has occurred in the very number of his journal in which his editorial is printed. Aye, more than that, it occurs on the page opposite his editorial, and in the

column and lines corresponding to his own words quoted above. It is a translation coming through the digestive track of two well known German journals, on "Belladonna in Collapse." This translation, for which he doubtless paid, is an abstract of a long article on the subject, which was originally published in his own pages on February 2, 1878. Alas! how soon parents forget their offspring when they have once thrust them forth into the world. I do not mention this fact, sir, to disparage the journal in question, which I look for with wistful eye every time it is due, but merely to answer the advertisement, which says, "Wanted—A Critic."—*A Reader of Journals.*

MEDICAL NEWS.

"Nulla dies sine linea."

QUARANTINE.—Last year Dr. T. S. Bell, who, if not a wise man, is one of the most learned medical men in the city, gave the citizens positive assurance that yellow fever could not prevail in Louisville. No precautions were, therefore, observed to exclude it. For several weeks no deaths occurred from it, except of persons who came from infected regions. A great ovation was given to Dr. Bell at the exposition building, at which he was compared to Him who commanded even the elements, and they obeyed. Two days after this the fever obtained a foothold in what was known as the infected district of the city, and there were fifteen or twenty deaths. This year the city has acted much more wisely. Last Saturday the Board of Health met, and adopted quarantine regulations for the protection of Louisville, which, while working no hardship on those from West Tennessee, will prevent the disease from obtaining a foothold here. Passengers will be examined on the trains by medical men, and if pronounced free from the fever, will go on unmolested; but their baggage will be fumigated and disinfected before being taken to any houses or hotels.—*Christian Observer.*

SEVERE INJURY OF THE FINGERS—ALOES USED AS A DRESSING—CURE.—Millet, in a case of contused and lacerated wound

of the fingers, where the phalanges only hung by a strip of skin and the tendon of the flexor digit. profundus, applied a split with an occlusive bandage containing powdered aloes, thickly covering the wound. Complete cure, with mobility of the fingers resulted, two dressings being used in fourteen days. The use of aloes as a dressing in wounds opening into the joints has long been known to veterinary surgeons. In 1874 Delioux da Savaignac recommended its use in general surgery.—*Rec. de Pharm. Mil.*———Dr. Moeller had under his care a child three years of age who suffered with phimosis. The mother had remarked that it urinated with difficulty, that the prepuce swelled up considerably at the moment, and that occasionally the stream suddenly stopped, causing the child to scream. The præputial opening only admitted a sound two millimetres in diameter, which detected a hard body. The præputial opening was dilated, and a calculus of thirty grains was extracted. Lewin, of Berlin (*Berlin Klin. Wochens*), records three cases of præputial calculus, and cites fifteen more, all of which are on record. These calculi may either arise from the præputial glandular secretion, from urine stagnating in the præputial sac, or from small urinary calculi lodging in this locality.—*Jour. des Sci. Med. de Louvain.* ———Our Paris correspondent writes: In the last number of the Journal I find an inquiry signed "Emigrant," as to whether he can practice on French territory with his English M. D. Your answer is correct, as the law stands at present; but before many months, perhaps weeks, if the Roger-Marvaise *projet* be carried out, it will go rather hard with foreigners who intend to practice in France; for no foreigner, whatever may be his qualifications, will be allowed to do so without taking a degree in one of the universities of the country; and the Minister of Public Instruction, who was hitherto omnipotent in these matters, will not be allowed for the future to grant simple permission to practice. Moreover, I am told that the new law is intended not only to keep out future "interlopers," but those now in France who have hitherto been allowed to practice through the favor of the Minister will only be required to pass an examination, for which a certain

lapse of time will be allowed; failing which, they will receive notice to quit either the territory or their practice. Such is liberal France. *Vive la Republique!—Brit. Med. Jour.*———Prof. Despres, in his *Clinique Chirurgicale*, mentions chronic contusion of the heel, as occurring in persons required to keep the upright position for a considerable time. The examination of the heel reveals nothing particular—there is no swelling or redness; pressure is not painful; but there is a sharp pain if we press with the tip of the finger upon the inferior face of the posterior tuberosity of the os calcis, being the precise place at which that osseous point bears upon the sole during the upright position. The patient describes his sensation as one of heat—even of burning. Those with arched or small feet and delicate skin, and who sweat copiously, are most exposed to this affection. Another predisposing cause is the wearing of shoes of thin leather, and prolonged walks upon bad pavements. The treatment consists of rest and the application of a metalic sole, moulded to the foot and worn inside the shoe.—*Med. and Surg. Reporter.*———M. Nicati fears the possibility of the transmission of diphtheria from birds to men. M. Trasbot has endeavored vainly to inoculate dogs and pigs, while the inoculation from one fowl to another is successful. A student of M. Trasbot placed some of the diphtheritic deposit from fowls upon his fauces without succeeding in inoculating the poison. M. Trasbot therefore considers Nicati's fears groundless. M. Mégnin also denies Nicati's theories, considering the so-called diphtheria of domestic fowls a parasitic disorder which can not be inoculated in the human race.—*Le Progres. Med.*———One of the best things we have ever heard of the Long Island College Hospital is that at its recent examination for conferring the degree of Doctor of Medicine, twenty per cent. of the applicants were rejected. Thirty-three were accepted and received their degree June 25, at the time of the annual commencement, held at the Academy of Music, Brooklyn.—*St. Louis Courier of Medicine.*———The Medical Department of Yale College proposes to extend the period of study to three years, and to exact an examination for admis-

sion and for advancement, and to make the method of instruction less didactic—more recitative.—*St. Louis Courier of Medicine.*———The medical students of Liverpool gave their annual dramatic performance in aid of the funds of the Liverpool Royal Infirmary on the evening of June 30. We understand that the performance was a great success.—*Brit. Med. Jour.*———Dr. Testa has treated five cases of jaborandi in mumps—four of them in one family. After free perspiration and salivation, there was a marked amelioration of the symptoms and the patients desired food. Next day the parotid swelling was much reduced, and in two days more the cure was complete. Dr. Testa thinks jaborandi acts by its hydragogue properties, that it may shorten the disease and prevent metastasis.—*Jour. des Sci. Med.*———In some parts of Germany physicians are not permitted to dispense medicines, when there is an apothecary in the place to do it for them. We learn from the *Allg. Hom. Zeit.* that three homœopathic physicians were practicing in Regelsburg, when an apothecary of the same belief came among them and notified them to send their prescriptions to him. Two of them refused and were brought before the court and fined about five dollars. The case was carried to a higher court, and the medicines (pellets) sent to the University of Erlangen for chemical analysis. The chemists of the university failed to find anything in them of a medicinal or poisonous nature, and so reported; whereupon the judge reversed the decision of the lower court, and declared that there was no law that prevented physicians from distributing sugar plums (*Zuckerwaaren*) as freely as they chose.—*N. Y. Med. Rec.*———Until recently our supply of the following chemicals was obtained entirely from Europe: Cream of tartar, tartaric, citric and carbolic acids, Rochelle salts and bicarbonate of soda; but now they are largely manufactured here. Our borax mines in Nevada supply the entire home demand for crude and refined borax, and very large quantities are exported. Our quicksilver mines on the Pacific coast yield largely; our export for the year is computed at 2,645,039 pounds.—*The Pharmacist and Chemist.*———An Irishman said his physician stuffed him with so much medicine that he was sick for a long time after he got well. This was the same man that told his physician, who had written him a prescription for an emetic, "that it was no use to give it to him, he could not keep it down."—*Chemist and Druggist.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

THE YELLOW FEVER.

Poor, stricken, helpless, bewildered Memphis! What is to become of her? What is to be the end of these repeated afflictions? Just rallying from last year's devastation, when every one was beginning to hope, and most were confident of a healthy and prosperous summer, to be again prostrated and her streets made to present to the world once more a vivid portrayal of the "desolation of desolations," is a bitter lot. In a twinkling, almost, the startling announcement that the dread pestilence was in their midst, burst suddenly upon its peaceful inhabitants, causing such terror and confusion, as though it were the awful blast of the great Archangel's trumpet. The commotion has ceased by this, and all is hushed in the ominous presence of the dread destroyer. What a weird and dismal aspect must the Memphis of to-day, contrasted with the Memphis of yesterday, present to the remnant of its unfortunate inhabitants? What must be their feelings upon seeing their home, a living, populous city, paralyzed and deserted and transformed into what it now is, as though by the power of magic. Imagination can scarcely grasp it; words can not picture it.

This second outbreak in Memphis is an additional proof of the germ as well as the exotic nature of the disease. The germs of last year's crop preserved during the winter have again been sown by some agency and under the vitalizing influence of a July sun, have again taken root. Thanks to the prompt action of the Board of Health, it has made little headway. The alarm was given at once, and all who could, have fled. It is estimated that only five thousand remain who are exposed to infection and these are being removed as fast as possible. The disease in Memphis must soon come to a halt, for the want of material to prey upon, and should no luckless germ brought away by its refugees fall into suitable soil, we may soon reasonably expect to hear of a cessation of its ravages.

Quarantines have been established in every direction, baggage is fumigated with bromine and sulphurous acid, and the sick that may be aboard are taken to hospitals. Here the precautions cease. Persons, at least so far as Louisville is concerned, from Memphis are allowed to enter without even changing their clothing. It seems to be forgotten that clothing as well as a beard or suit of hair are potent carriers of infection. The sick person's body can not convey the poison and his clothes are scarcely more liable to contain the contagion than those of others who come in freely. Thus it will be seen that though quarantine is established it is not absolute, and should the fever break out here it will be idle to abuse the inefficiency of quarantine. The manner of its enforcement will generally prove to be the weak point. Natchez was undoubtedly saved by quarantine last summer, and is indisputable evidence of what quarantine can do. There are now four cases of yellow fever developed in refugees here, and whilst pitying Memphis and sympathizing with its brave physicians it is well to mention the above as a caution in regard to the present quarantine. It is very possible for the fever to take hold here. Last fall, in a limited area, there were thirty-eight deaths, all natives of this city.

Messrs. Wm. R. Warner & Co., will receive our thanks for a bottle of their excellent sugar-coated quinine pills. They are as sweet and tempting in appearance as a sugar-plum, and pure and efficacious as quinine can be. The sugar-coated pills of this reliable firm are so well known to all physicians that nothing additional need be said in their favor.

Attention is directed to the new advertisement of Messrs. J. & W. Horlick & Co. The firm has sent us a quantity of its prepared food for trial, which will be reported upon as soon as practicable. A point in favor of the food is the fact that the manufacturers have great faith in it themselves. They have furnished us with a sample and court an unbiased opinion of its usefulness.

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XXVIII.] SEPTEMBER, 1879. [No. 3.

ORIGINAL COMMUNICATIONS.

"Qui Docet Discit."

ART. I. *A Medicated Pessary, with some Cases in Gynæcological Practice and Obstetrics.* By J. P. THOMAS, M. D., Pembroke, Ky.*

A MEDICATED PESSARY COMPARED WITH OTHER PESSARIES.

In 1860 my attention was called to a formula for a medicated pessary by my friend and preceptor, Dr. E. B. Haskins, of Clarksville, Tennessee, which had been shown him by Dr. W. K. Bowling, of Nashville, Tennessee, the distinguished founder of the Medical University of that city, its Professor of Practice for thirty years, and since an ex-president of the American Medical Association. Dr. B. gave it as the formula of Dr. Rezin Thompson, who made and used them. Knowing Dr. T. personally and considering him as a man of very eccentric and erratic ideas, and as the man whom I had heard boast that he had and could cure any case of syphilis with whisky alone, I gave the matter no attention until a year afterward, when the same formula was shown me, and the pessary exhibited by my friend, the late Dr. John S. Crouch, of the vicinity of Clarksville, Tenn. I knew that Dr. Crouch had been for several years, and was then, engaged in an extensive gynæcological practice. He assured me that it was invaluable in

*Read before "The McDowell Medical Society," at Owensboro, Ky.

nearly all diseases of the os and cervix uteri, either as a curative or as an adjuvant to other treatment, and that he had been using them in prolapsus, engorgements, endocervicitis, etc., with great advantage. With this testimony in its favor, I concluded to give them a trial in the first suitable case. Thompson's formula (afterward published, I believe, in a small volume issued by him on fevers) was as follows:

℞. Flour ulmi cort., 1℔.,
Powdered sassafras, ℥iv,
Powdered ipecac et opii, ℥ij,
Balsam copaiba, ℥ij.

The powders are to be intimately mixed by passing them sufficiently often through a gauze sifter. The copaiba is to be thoroughly incorporated with the powder, and water gradually added until the mass by constant working or kneading acquires the consistency of stiff dough; then roll into balls from one to two inches in diameter according to the desired size or shape of the pessary. When the balls are perfectly round place them on a smooth board in the sun or, if cloudy, under a stove to partially dry. When they begin to feel hard moisten them slightly and smooth and close any cracks that may have formed, and after a few hours manipulate them into any form desired. This will be found the most difficult part of the process, for often after being shaped to suit and put to harden they crack or assume a bad shape. When they so act they should again be moistened and the manipulations again repeated until the desired shape and smoothness of surface have been obtained.

I usually make them in one or the other of the two shapes shown in the samples. A good plan to make them smooth is, after they are perfectly dry and hard, to trim off the rough points with a sharp penknife and finish with sandpaper. Being somewhat rough, however, is of small moment, as they must be dipped into warm water to facilitate their introduction, which softens the surface and renders them very slippery, and then a little manipulation will smooth off the rough points.

A moment's consideration will convince any one of the

therapeutic value of this instrument in many, at least, of the minor diseases of both uterus and vagina. The elm is well known for its cooling, soothing and emollient action upon all inflamed surfaces, erosions, etc. The power of balsam copaiba in inflammations of the mucous membranes has long been recognized. It has often been employed with success in gonorrhœa, by injection combined with some demulcent. In my hands it has on several occasions proven eminently successful in the treatment of this disease, and I believe its action in gonorrhœa, when internally administered, is through its local and not specific effect. Dover's powder is added to the formula only, as I suppose, for its anodyne and soothing properties in allaying pain; but we all know that, aside from the specific anodyne properties of opium, it does possess the power of arresting inflammation in the tissues through some other unknown virtue. The long acknowledged alterative action of ipecac on the respiratory mucous membranes, and the comparatively recent discovery of its powers in the cure of dysentery, are well known. And, lastly, we have the stimulating action of sassafras, added to its local alterative effect, upon mucous tissue (which I have found only equaled by turpentine), to say nothing of its antiseptic properties, which are of no doubtful character.

All combined form, to say the least, a most admirable poultice to parts often demanding gentle stimulation, together with a soothing anodyne application to arrest pain and consequent reflex nervous irritation and local inflammation. All the above indications are met in the composition of this pessary. I have recently varied the formula to suit peculiar points in individual cases; for instance, substituting bromide of potassa for the inert sulphate in the composition of the Dover's powder.* I have prepared them after the following formula, one of my own and which I now use exclusively:

* Dover's powder prepared after the formula above given I now constantly use internally and find it far superior to the old formula. We obtain the gentle hypnotic effects of bromide potassa, which, as suggested by Dr. S. Weir Mitchell, counteracts the nauseating effects of morphia. And if of its salt, why not of opium itself?

℞. Ulmi cortex pulvis, 1℔.,
Bromide potassa, ℥ii, } Dover's powder.
Pulvis opii, ℥ii, } Dover's powder.
Pulvis ipecac, ℥ij, } Dover's powder.
Sub. nit. bismuth, ℥ij,
Balsam copaiba, ℥iv,
Pulvis sassafras rad. cort., ℥iv.

prepared as the first formula.

These pessaries possess many advantages over the first formula in a number of uterine troubles, especially where the secretions are excessive. Having domestically prepared and used this pessary with advantage in all the incomplete forms of prolapsus as well as in a few cases of complete, and in several other forms of uterine trouble, and not finding any of my medical friends or confreres acquainted with it or its therapeutic powers, is the excuse for including an account of it in this paper.

UTERINE MISPLACEMENTS.

When after a careful study of the uterus and its appendages, and when we fully comprehend and appreciate the wonderful mechanism of its natural supports, it is surprising that it can become so easily displaced as sometimes seems to be the case. But with this exact knowledge of its anatomy and its surroundings comes the conclusion that much deviation or material displacement of an organ so nicely and securely adjusted, must of necessity produce more or less disturbance of the nervous system and consequently of the whole organism. I believe it is admitted that any of the various misplacements of the womb, that either of the versions or flexions, or partial or complete prolapsus, may produce a disturbance of the general system demanding treatment both local and constitutional. But the question presents itself, are all these conditions remediable by mechanical or constitutional means? They may be to a considerable extent in the hands of the specialist, but they are rarely so in those of the general practitioner. And often with the specialist not only failure but injury is the result of his efforts to correct these misplacements.

I am opposed to the indiscriminate use of the various pes-

saries and mechanical appliances now so commonly resorted to by any and every practitioner of medicine, for the reason that, in the aggregate, much more harm than good is done by their use.

Even so distinguished and skillful a gynæcologist as Dr. T. G. Thomas has the candor to acknowledge, as the result of the introduction of a pessary by himself, the formation of a large, ragged and very ugly ulcer in the vagina. He says he removed a pessary from a patient who had been under the treatment of a charlatan, and found a ragged and deep ulcer produced by the clumsy and very coarse pessary of the charlatan. He was tempted to expose the advertising pretender, but restoring the parts by appropriate treatment, he introduced a retroversion pessary (of course of the most approved pattern and finish), and to his astonishment, in a week's time only, on removing it he found a large and ragged ulcer. He also adds that the only difference between that created by himself and that by the charlatan was that his was a little the larger and more vicious in appearance. Now Dr. Thomas is not only acknowledged as one of the most skillful operators in uterine surgery, but the most reliable writer and teacher on gynæcology, and his report of the case is strong proof of the latter fact.

I admit not only their usefulness but their necessity in many cases, but they should be employed with care and even with hesitation by the experienced, and not at all by those who have not made their mechanism a special study, or who do not fully undestand the anatomy of the female pelvis, and especially the natural supports of the womb and their relation to each other. Never forget the uterine relations to the rest of the pelvic viscera, and then apply them only with the greatest caution. In properly adjusting these hard, unyielding pessaries always exercise careful watchfulness over any patient wearing a purely mechanical, intra-vaginal support of any description. I have seen much injury inflicted by them, and one case of peritonitis produced by a Hodge's pessary, which resulted in death. For these reasons only, if for no other, I would recommend the pessary here described, par-

ticularly to the general practitioner, who has such a variety and multiplicity of diseases to engage his attention that he has not the time to devote to one class, and especially a class that requires such careful watching as do uterine diseases.

In prolapsus uteri (the "scape-goat" of every married, or at least, child-bearing woman who has a continued "backache" or a "dragging in the bottom of the bowels," as they often express it, and the opprobrium of the gynæcologist), in its uncomplicated form, this medicated pessary is to be preferred in the majority of cases for several reasons. First.—Because it is incapable of doing harm. Second.—The merest tyro in gynæcology can easily introduce and adjust it, and because in many cases in which it is beneficial the patient herself can be taught to place it in position. Third.—Because it does not require removal at all, but removes itself when it has accomplished all the good of which it is capable. Fourth.—Because it not only affords as much mechanical support for as long a period as the majority of pessaries should be permitted to remain *in situ* without removal and cleansing, but it does so without irritation of any kind or degree. Fifth.—It is an admitted fact that no pessary should be used that unduly distends the vagina; and my experience teaches me that nearly all anteversion and retroversion pessaries do this necessarily, in order that support for the pessary itself may be obtained, either under the arch of the pubis or, as in retroversion pessaries, they push up and distend the cul-de-sac unduly that pressure may be exerted by the posterior end of the pessary upon the body of the uterus. This pessary is free from this objection, and if made large enough for such pressure its yielding and softening surface will prevent injury. Besides the principle of raising to a perpendicular, or nearly so, an inclined inverted cone by pressure applied to the inverted apex, is of doubtful philosophy, especially when the cone with its apex downward consists of elastic muscular fibre. This is often attempted before replacement by other means. Sixth.—Because the objections properly urged against cupped pessaries, that

pressure of the os by weight of the uterus upon the cup produces injury to the cervix, can not be urged against this pessary. On the contrary, even where there is abrasion or ulceration, it is rather beneficial than otherwise. Seventh.—Because when properly introduced with the cervix resting in the cup, and gentle upward pressure with the finger on placing it in position, and continued for a few moments, it adheres to the os, and the vaginal walls contract sonewhat around its lower border and thus retain it *in situ*, which obviates the necessity of varying the size to the capacity of the vagina as in all other pessaries. Eighth.—Because they tone and strengthen the vaginal walls and thus increase its supporting agency.

It is not claimed that this pessary will relieve any but partial versions or flexions, but that it has in my hands often restored all these misplacements when of moderate or slight degree. But after all that has been written in favor of version and flexion pessaries, are these misplacements in the second and third degrees and of long standing ever permanently benefited by the use of any pessary? However, this pessary can be made into any form desired; it can be fashioned exactly after Hurd's version pessary; and I have intended to have some sort of machinery made by which they can be manufactured more easily and uniform in shape, and of any form desired. I repeat it, that in any case of simple prolapsus in the natural axis, this instrument will meet all the indications and accomplish more than any pessary yet devised can do.

If the prolapsus is complete, even unto procidentia, after replacement, and, of course, the reduction of any engorgement or inflammation that may complicate the accident—by rest, the continued hot water douche, leeches, or scarificaton if necessary, we have only to place the pessary in proper position and if required pack the vagina below it with cotton soaked in glycerine, or make the pessary of sufficient thickness to keep the organ in position while its base rests upon the perineum. They usually remove themselves in from four to six days as an inert and shapeless mass, and but for

the antiseptic properties of the sassafras, owing to confinement in a hot and often inflamed vagina absorbing the vitiated secretions, it would also become decomposed and fetid and cause irritation. If the vaginal or uterine secretion is excessive the pessary will disintegrate more rapidly and be expelled sooner. For this reason, where the opposite is the case and the poultice action of the pessary is desired, it is better to moisten it with occasional warm water injections.

I have employed them in all cases of uterine leucorrhœa—in mild cases unaided they have produced a cure—and in several cases after mopping out the whole endometrium with tincture chloride of iron, Churchill's iodine, or what is better than either, "iodinized phenol chloral," a formula for which I gave in an article on the therapeutics of this alterative and local anæsthetic, in the May number of *The American Practitioner*, 1877, to which you are referred. In every case of congestion, after leeching, scarification, or alterative applications are made, they prove most agreeable to the patient and I think assist in reducing hypertrophy and slight induration.

CASES IN PRACTICE

Will better illustrate the value of this instrument than any other method.

Case I.—Mrs. F. B., married, nullipara, age 26, came under treatment June, 1861, with partial prolapsus, violent dysmenorrhœal attacks accompanied with hysteria and anæmia. To my surprise a half-dozen medicated pessaries restored the womb to normal position, and entirely cured the reflex dysmenorrhœa aided by iron and valerian. Since the above period I have continued their use variously modified.

Case II.—Mrs. A. B., primipara, in eighth month of gestation became a sufferer from retention of urine; after relieving her quite a number of times with the catheter, I concluded to try one of these pessaries to see if it would not remove somewhat the pressure upon the vesical neck; she was at once relieved of her retention and there was no further need for the catheter. This case exhibits the unirritating character of the pessary. There is small danger, in most cases, of exciting uterine contractions in any stage of utero-gestation by their use.

Case III.—Mrs. W., aged 35, mother of three children, attended in each confinement by a midwife, has a typical case of what I term complete prolapsus uteri; came under treatment January, 1872. Had been for five years unable to attend to domestic duties, most of the time being confined to bed. Her constant symptoms were dragging sensations and great weight in pelvis on at any time assuming the erect position, almost constant vesical and rectal irritation, continued pain in the sacral region, unable to lift the least weight, fainting feeling on standing, extreme prostration on attempting to walk even across the room. Had been under the treatment of several physicians and had worn different kinds of pessaries; condition anæmic. On examination found the cervix protruding somewhat beyond the vulva; this while in the horizontal position; if standing, but for the enormously engorged and hypertrophied condition of the whole organ, would have descended between the thighs. After reducing the engorgement by frequent scarifications and large quantities of hot water in the form of douche, two gallons at a time (occupying twenty days), the os was then painted with iodinized phenol chloral every fourth day, and the douche used during the intervals. The womb was replaced and the largest sized pessary introduced, replacing it with a fresh one every sixth day, removing the old one if still remaining, and washing out the vagina before each adjustment of a pessary with the continued douche as at first. This treatment was pursued persistently with the patient confined to a recumbent position, until eight pessaries had been used together with iron and various tonics, when she was gradually permitted to assume the duties of her house, but directed to keep a pessary constantly applied. She used six others after she began exercise, and never had a single symptom of the many of which she had constantly suffered for five years under the use of other pessaries, among the number Meig's ring, Hodge's, Smith's and other good intruments. She had also worn that abomination, the old glass pessary. Her general health was restored; she had continued free from any uterine troubles up to June, 1877, when last heard from—she being at present a citizen of Arkansas.

Case IV.—Effie Tortson, mulatto, mother of twenty-three living children of whom twelve are still living. Had had prolapsus for several years; had constantly worn either glass or hard rubber pessaries for a long time, which enabled her to attend to the varied duties of servant and mother of so many children. When one day attempting to lift a tub of suds, a hard-rubber globe pessary together with the uterus was forced completely outside the vulva; for which I was summoned to see her. I found the entire organ resting between the thighs and swollen to such an extent, that it was only after a free use of warm water that it could be replaced within the pelvis, and then with considerable difficulty. For fifteen days used hot alum douches with perfect rest, before any mechanical support was applied, when a Hodge's pessary was carefully adjusted, with a compress of cotton and a perineal band and abdominal supporter; but in a few days the pessary gave so much pain, owing to the inflamed condition of the organ, that I was compelled to remove it. The alum douche was renewed for a week longer, and then the largest-sized medicated pessary, with the canal in it sufficiently large to admit the whole cervix, was introduced and renewed every five or six days until she was entirely relieved —requiring over six months. She has remained free from uterine trouble ever since, now nearly eleven years; she is still living and in fair health at the age of 67 years.

Case V.—Mrs. A. J., in seventh month of pregnancy, was constantly annoyed by incontinence of urine. The use of the medicated pessary gave her great relief by its power to relieve the vesical irritation, and probably by removing somewhat the pressure upon the urethra; and, as incontinence is often a very troublesome complication of utero-gestation, this pessary will be found, in many cases, not only a relief to the patient but her medical adviser.

Case VI.—Mrs. T., with ante-version so complete as to interfere with micturition to such an extent, by pressure on the vesical neck, that it produced an almost constant desire to evacuate the bladder, and became very harassing to the patient, preventing sleep at night (but I think there was in

this case some reflex vesical irritation, else the symptoms would have been greatly modified at night, especially when she occupied the dorsal decubitus, but they were the same night and day); her general health became greatly impaired. The treatment consisted in an effort at partial replacement of the uterus by manipulations with the sound *in utero*, position on back with hips raised, the introduction of a medicated pessary shaped after the pattern of Hurd, packing the vagina with cotton and confinement to lateral and dorsal positions. The reposition was not perfect, however, but sufficiently corrected to give entire relief to the vesical irritation.

Case VII.—Mrs. R., aged 32, mother of four children; some vesical complications with persistent constipation, fæcal impaction, headache, backache, etc. On examination a retroverted uterus of sufficient extent to antevert the cervix against the vesical neck was diagnosed and confirmed by sound. After several attempts at reposition, the patient being placed alternately in the various genu-postural attitudes, aided by sound *in utero* and two fingers in posterior cul-de-sac exerting pressure downward toward a "pendulous abdomen," with all possible traction upon the cervix upward toward the sacrum, without success. She was then placed in the genu-pectoral position of Dr. Campbell and the vagina widely distended, when the organ suddenly assumed its normal position pneumatically, as recommended by that distinguished gynæcologist, Dr. H. F. Campbell, of Georgia, in his able monograph on this subject. It was kept in position by a Hodge's open-lever pessary; but mainly, I think, by a three weeks' semi-face and side position, removing the pessary every five or six days for cleanliness, and preventing fæcal impaction by enema. After this time a medicated pessary with a projecting cushion, as it were, fashioned on its posterior end to fit the cul-de-sac, was worn for three months, renewing it as disintegration began in the old one. All troublesome symptoms were relieved, but the lady still has a partially retroverted uterus. I have little confidence in the mechanism of any contrivance yet devised to radically and completely restore either of these displacements or their twin sisters, ante-

flexion and retroflexion, for they are nearly allied as to their pathological conditions, so to speak, notwithstanding the weight of almost all modern authorities as to the distinction to be drawn between them. I believe that rest and position together with proper constitutional treatment will do more in restoring these misplacements than any mechanical appliance in all chronic cases. Of course, when of very recent occurrence, they are nearly always relieved permanently with a suitable instrument properly applied. I would remark in this connection that the use of Dr. T. G. Thomas's retroversion pessary, in a very recent case, has given me great satisfaction. It is simple and uncomplicated and easy of introduction. I have had no experience with his anteversion instrument, but from an examination of it I think the hinged arrangement too complicated for general use. The medicated pessary is all that is required in half the "every-day" cases of uterine disease in general practice. Cases like the foregoing could be detailed unto weariness, but it is unnecessary, as the test of experience is the only convincing logic, and I only hope what I have said in their favor will induce you to put them to such test.

Case VIII.—A dislocation of virgin uterus backward into the hollow of the sacrum. On May 22, 1870, I was sent for hurriedly a distance of eight miles to see Miss N. C., aged twenty years. I found the patient suffering apparently the most agonizing pain in the entire pelvic region, accompanied with spasmodic contractions of the rectiabdominales and gastrocnemii muscles. After giving the first hypodermic dose of morphia ever administered by the writer, I obtained the following history of the accident taken from notes of the case made at the time: A few hours before I saw her, Miss C., intending to pay a visit to a neighbor, had mounted to the top of a very high fence while her young brother led up and held the horse for her to mount; being somewhat above the horse, in the act of seating herself in the saddle, her person descended as in the act of seating one's self in a chair, when the horse "shied off" from the fence just at this moment, and she was thrown to the ground upon her

back. The shock was so great as to produce unconsciousness for a few minutes, which time was occupied, as is usual, by the family in dashing water in her face and applying restoratives, etc. When consciousness returned, however, it was found impossible to place her in an upright position without the most intense suffering. She was accordingly removed to her room and bed on a sheet. The whole abdomen was swollen and very tender on the slightest pressure and somewhat tympanitic; pulse 110. It was evident then that some very serious injury had been sustained by some of the abdominal or pelvic viscera, but what organ or tissue, or of what character, I was at a loss to determine. Fearing peritonitis and finding tympanitis, I ordered flannel stupes dipped in hot vinegar constantly applied over the whole abdominal region with the following:

℞ Sulph. morphiæ, grs. iv,
Mucl. acaciæ, ℥iijss,
Spts. terebinth, ℥ss.

M. *Ft. emulsio.* S. One teaspoonful every three hours, or oftener if required to prevent pain. Five drops of veratrum viride were ordered every three or four hours according to impression on pulse; bowels opened by enema.

May 27. The morphia and fomentations had kept her comparatively free from pain, but was informed by her mother that she had a desire to micturate but could pass no water. On palpation of vesical region found the bladder distended with urine; informed her mother that a catheter would have to be used and that a vaginal examination was imperatively demanded; to which the young lady, at first, positively refused to submit, but through the persuasion of both parents, finally consented. The introduction of a catheter only by touch I found a very difficult undertaking in a virgin, and in this case, after the meatus was entered by the instrument, its progress was arrested by what seemed an entire closure of the urethra; but by slightly depressing the open end of the catheter it entered the bladder, and a large quantity of brown-looking urine was drawn off. Examination with index finger, *per vaginam*, revealed the cervix uteri

pressing compactly, as if wedged, high up under the arch of the pubis and against the urethra. The rectum was then thoroughly evacuated by repeated enema, and by gentle and gradual dilatation I succeeded in introducing the index and middle fingers of right hand when a hard and unyielding tumor was felt pressing upon the rectal wall. It seemed much too large for a virgin uterus, nevertheless the diagnosis was made of dislocation of the uterus into the hollow of the sacrum, and impacted below the sacral promontory by engorgement of the organ after displacement. The sound was not used in this case to confirm the diagnosis, because, first, the os was too high behind the pubic wall; second, because I deemed it difficult, if not impossible, to introduce the smallest size, besides the danger attendant upon such a procedure under the ciscumstances. There being still too much tenderness to attempt reduction, the above treatment was continued with the addition of a small blister to both sacral and hypogastric regions, and frequent hot water vaginal douches with the hope of reducing the engorgement and preventing pelvic peritonitis.

May 28. To-day, after a thorough recto-vaginal examination, the pulse was only 100; continued treatment. The patient was visited once each day and sometimes twice. Suffice it to say, that under this treatment with slight alterations the acute symptoms subsided in ten days, leaving only a severe neuralgia, which seemed to be the result of the extreme shock upon the nervous system.

May 30. To-day, under the influence of a full dose of morphia only, the patient was placed in the knee-elbow and knee-breast position. The index and middle fingers of right hand, well oiled, were introduced to their full length into the rectum—the middle finger of left only into vagina; with the former steady, downward pressure was made upon the tumor, at the same time all the traction possible was exerted upon the cervix upward toward the sacrum. Two hours of such manipulation was practiced without the least apparent mobility of the tumor. This procedure was repeated for over an hour every other day for eight days without producing any

change in the relations of the parts, when a colpeurynter was introduced under the cervix or behind it in the hollow of the sacrum, distended, the tube tied and left there; opium continued and wine ordered liberally, with perfect quiet in the side-face position. The use of the bag was continued for ten days, removing it each day, and a continuous hot douche for an hour before it was again replaced without the least benefit. This course was pursued so long only because the previous vaginal and rectal manipulations had produced unpleasant effects, exciting fever and increasing neuralgia, with considerable abdominal tenderness. With perfect rest, however, and daily use of the vaginal douche, the fever and tenderness disappeared, leaving as before the neuralgia, which was only endurable by the free use of opium.

Manipulations for the reduction of the retroverted womb were resorted to at intervals with the patient in every conceivable position that gravity could aid in the replacement of the organ. The engorgement of the cervix was treated by scarifications and free bleedings with the hope of restoring menstruation, without benefit except in somewhat relieving the vesical trouble. The various neuralgic therapeutics were tried, including belladonna, quinia, ergot, iron, arsenic, strychnia and electricity, to no purpose. Consultations were had, suggestions of others tried—still no relief; and life became a burden, and death was prayed for as the only relief.

This was her condition on the first of November, when I wrote a full history of the case and its treatment to Dr. Henry Miller, Kentucky's great gynæcologist; but the doctor was some time in answering my communication, not until the 30th, in fact just thirty days, and the pleadings of the young lady and her friends were urgent and to me distressing—so much so that they forced "necessity" upon me, and she proved in this case the "mother of invention."

I formed from a piece of hickory wood a sort of spatula, the blade much thicker, however, with rounded point and edges, an inch in width; after polishing the surface it was covered evenly and tightly with chamois leather. On November 12, 1870, the patient was placed in knee and elbow

position, with pillows under the elbows so as to raise the shoulders above a plane with the hips. This position was assumed because it had constantly occurred to me that a downward or outward pressure exerted upon the fundus uteri, so as to push the womb in the direction of the perinæum, was necessary to dislodge it from the apparently overhanging promontory of the sacrum, at the same time exerting steady pressure directly downward toward the anterior pelvic walls. Consequently the covered spatula was well oiled and carefully introduced, *per rectum*, along the palmar face of two fingers as a guide until its rounded end occupied a position slightly above the fundus, then withdrawing the rectal fingers and introducing the index and middle fingers of left hand *per vaginam*, simultaneous pressure was made upon the fundus outward and directly upon the body of the womb downward toward the anterior pelvic wall with spatula as a lever, and traction on the cervix upward to the sacrum. With this manœuvre the reduction was accomplished in twenty minutes, to the great joy of the patient and extreme gratification of the operator.

Many will pronounce this rough usage of a virgin uterus, and the writer was once very much of their opinion, especially when its sequence had to be vigorously combatted to save the subject of it from death; but the case was a desperate one and I think justified the treatment.

The sequelæ were pelvic peritonitis, extreme tympanitic distension and increase of uterine congestion; all of which, however, yielded to blisters, opium and turpentine; the congestion finally to scarification, the hot douche and Churchill's iodine. The neuralgia, strange to say, perhaps never was again a factor in the case, but was cured by the replacement; so was the the suppressio mensium. There was for several months some prolapsus incident to the manipulations, together with irritation of the cervix, for which she wore a medicated pessary until entirely relieved.

The following letter was received from Dr. Miller, as its date shows, eighteen days after the reduction:

LOUISVILLE, KY., November 30, 1870.

Dr. J. P. Thomas:

DEAR SIR—Dr. Gaillard placed in my hands a letter of yours in which you ask my advice relative to a young lady patient laboring under uterine trouble. I suppose there can be no doubt that the retroversion of the uterus was produced by the fall she got in attempting to seat herself on her horse, and that her symptoms since are due to the displacement and and its effects. There is still, doubtless, congestion of the uterus, possibly inflammation, and I would recommend the application of four or five leeches to the os uteri. The largest sized tubular speculum that can be introduced would be preferable to the valved speculum, and if you have difficulty in bringing the os and cervix within the speculum they may be drawn into it with a tenaculum. The leeching may be repeated every fortnight until menstruation is induced. While the leeching is being practiced let her use emollient and anodyne injections, a thick decoction of flax-seed with two or three teaspoonfuls of laudanum added to each injection, which should consist of a pint of the flax-seed injection. Let her take daily or twice daily a tepid hip-bath, remaining in the water half an hour. If this antiphlogistic course does not restore menstruation and afford relief to the pain, I would in the next place lightly cauterize the mucous membrane of the uterine cavity, by wrapping a uterine probe or sound with cotton and saturating the cotton with a solution of the nitrate of silver, two to three scruples to the ounce of distilled water. If the uterus is decidedly prolapsed it would be well to raise it and support it with a Hodge's pessary properly suited to her case. For the relief of the accompanying neuralgia I do not know that I can suggest anything better than the remedies you have prescribed for her. I should be pleased to hear of the progress of the case.

Yours respectfully, H. MILLER.

Now the reduction had not been accomplished when I wrote to the doctor, and yet he makes no suggestions as to any method by which it even should be attempted, unless by the excellent and conservative course recommended for re-

ducing the congestion and inflammation, and the consequent establishment of menstruation, he hoped the displacement would correct itself. In another communication, however (which was misplaced), if my recollection is correct, he says, "these dislocations or extreme retroversions often are irreducible, and entail on their subjects a life of miserable discomfort."

This case is reported, first, because traumatic retroversion, so to speak, is rare; and, second, because of the barbarous and yet successful method resorted to for its reduction; and, last, but not least, because it was a case that greatly interested such a master as the late Dr. Henry Miller; of the truth of which I have other evidence than his plain, candid letter of advice to a novice in gynæcological science.

The young lady was married two years afterward, and is at present the happy and healthy mother of two robust children.

I had not then read anything upon the pneumatic method of uterine replacements, and especially Dr. Campbell's graphic exposition of the principles of the method, and his extensive experience with it in every variety of misplacement, and had no knowledge of it. But had this been the case, as distinctly stated by Dr. C., this was not a case in which the application of the method would have proven beneficial. I had not then studied the various genu-postural manœuvres, but a common knowledge of the laws of gravitation, and often observing old midwives place the woman on her knees and elbows to facilitate labor, had then taught me to resort to it in obvious positions of the presenting part, and it was this intuitive knowledge, so to speak; that suggested the various positions in which this young lady was placed first and last. Neither had I then seen Dr. Gaillard Thomas's ingenious suggestions as to the advantages of the genu-pectoral position in replacing a prolapsed funis, but had long before learned from Dr. John F. Bell, an old and respected practitioner of over forty years in my county, that to replace a prolapsed cord, placing the woman on her elbows and knees was the best position, and had frequently practiced it—not always with success, however.

In granular degeneration of cervix, when uncomplicated with endometritis or other more serious affections of the uterus, with which it is so often accompanied and by which it is probably produced, a few applications of the iodinized phenol compound and one or two medicated pessaries have often effected a cure. The same result follows this treatment in cystic degeneration, when the cystic hyperplasia is not extensive but is composed of the usual small cystic granulations, after puncturing the cysts with any narrow-pointed knife, except that the alterative application should be repeated oftener, at intervals of three or four days. Dysmenorrhœa, not mechanical, but purely nervous or reflex, will usually be relieved by the hot water vaginal douche, and the medicated pessary with *Viburnum prunifoliatum*, the "tincture antacrid" of Faulk, originally a prescription in secondary syphilis, composed of balsam of *Fir*, gum *Guaiacum*, oil of sassafras, bi-chloride of mercury in alcoholic menstruum. When produced by stenosis I never resort to incision, but depend upon dilatation, being convinced that incision is not only extremely dangerous, but seldom or never results in permanent benefit, even in the hands of the skillful and experienced Sims. I do not believe that dysmenorrhœa is ever produced by either of the flexions, but the elasticity of the uterine muscular fibre, aided by the contractions of the uterus, are sufficient to allow the escape of the menstrual flux without producing much pain.

Case IX.—A recent case, Miss McR., a maiden lady, aged 40; dysmenorrhœa of long standing and stricture of cervix. Treatment: The introduction successively of three sizes of uterine probes and four graded sizes of slippery elm tents; afterward the introduction of a very small sized medicated pessary, repeated only until three were used, with "tincture antacrid" as an alterative emmenagogue; result, entire relief for the last three periods.

SULPHATE OF BEBEERIN IN SYSTEMIC MENORRHAGIA.

In 1860 I read in an old number of the *Memphis Medical Record*, 1847, a short paper from the pen of Dr. Quintard, then professor of physiology in the Memphis Medical School,

at present bishop of the episcopal diocese of Tennessee, on this drug in menorrhagia, in which he gave an account of his accidental discovery of its powers in this trouble, which was briefly that he had prescribed the drug to a lady for what he termed indistinct chills, as a substitute for quinia—the patient protesting against the use of quinia in her case. After she had taken it in three or four grain doses for a few days, without arresting the cold stages, the doctor informed her that she must take the quinia. When she said, "Doctor, I have a very chronic trouble, of which I have not told you, and I believe if you will double the doses of this black powder, it will cure me, as it has already benefited me more than any remedy I have yet used, and they have been many;" she then told him of her menorrhagia. He concluded to test it and increased the dose to six grains three times daily, with a complete cure as the final result. I have used it in every case of menorrhagia dependent upon inertia of the uterus, or that was not caused by fungus growth requiring the curette, or upon some mechanical cause, as polypi or the various uterine tumors. It will seldom fail in connection with mineral tonics in any simple case of menorrhagia, and is often of great benefit in many cases of metrorrhagia.

LACERATION OF CERVIX UTERI.*

There are many cases of this accident treated by the knife—owing to the prevailing mania for subjecting this much-abused organ to every variety of surgical procedure—that are so slight or superficial, that often a very simple treatment would suffice to heal by granulation and without the infliction of pain. And there are some cases mistaken for that "bug-bear," ulceration, and the cervix tortured with caustics of the most powerful character, nitrate of silver, acid nitrate of mercury, chromic acid, nitric acid, and

* June 10, 1879—Since the above was written and read before "The McDowell Society," I have to-day had the pleasure of reading in the January number of the *American Journal of Obstetrics*, 1879, from the pen of its editor, what I believe to be the most lucid and descriptive paper on this accident ever published, and can only add had it been studied before, this portion of the paper would have been omitted, or more elaborately and intelligently written.

often the actual cautery, which might yield to a much gentler treatment, or at least to a simple operation. I have treated several slight lacerations successfully by painting the cervix with the phenol compound and cotton-wool saturated with carbolized glycerine constantly applied between the intervals of its application, and have never operated but once.

Case XI.—Mrs. B., aged 38, mother of two children; youngest twelve years of age. Laceration consisting of four rents in the cervix; symptoms, constant backache, frequent headache, constant hot spot over seat of anterior fontanel. The laceration simulated ulceration, for which she had been treated by several physicians with caustics, and, as she stated, with temporary benefit; the longest relief from her symptoms was six months. Notwithstanding this history of the case, with its treatment and results, she was treated with the hot water douche and occasional applications of the phenol compound, glycerine cotton-balls, and the medicated pessary, with only very partial relief. As a last resort Emmet's operation for laceration of the cervix was performed, requiring only four sutures with a dressing of cotton-wool in carbolized glycerine; the edges united by first intention, and instead of the ragged, notched and everted os uteri, it presented *per speculum* a smooth and rounded appearance. Relief from all her troubles was the result of the operation, which of itself is simple but tedious to execute. The profession and the female sex owe to Dr. Emmet a debt of gratitude for his suggestion and simplification of this operation.

ANTE-PARTUM HÆMORRHAGE.

This must be of rare occurrence when not caused by placenta prævia, as I find in some of the standard works examined only a brief mention of it, and in the majority no notice whatever.

Case XII.—Mrs. T. M. B., aged 30, mother of five children, all living and healthy. In seventh month of pregnancy; had been complaining for past month of vertiginous symptoms, a constant full feeling about the head. She had repeatedly requested me to extract blood from her arm, which

I refused to do. She is a lady of culture and wealth. On March 15, 1878, I was sent for in haste by her husband, who wrote me: "My wife has fallen from the top of a desk and is flooding profusely; come quickly, though she says she feels much better than before the fall." The messenger found me at the bed-side of a medical friend, eleven miles from the lady's residence. Mounting a fleet horse, I arrived in one hour and a quarter after the reception of the message, and about three hours from the fall. I will make no positive statement as to the quantity of blood lost, for to do so even after making a full deduction for the usual overestimate owing to the large show of even a small hæmorrhage, it would be incredible. We estimate the amount of blood in the human body as one pound to eight of its avoirdupois. The lady's weight was 160 pounds, which would give her twenty pounds of blood in the unimpregnated state; more in the present state, or about two and a half gallons; nevertheless the quantity lost seemed much more than one gallon, and was still flowing on my arrival and for some time afterward; yet she was very comfortable, she said, and no ways alarmed; pulse 80, and full enough. Examination *per vaginam* revealed the cervix dilated only sufficient to admit index finger. Suspecting placenta prævia but finding none, I was at a loss to account for the origin or source of such an immense quantity of blood. The membranes were not ruptured, there was no partial or central implanting of the placenta, she had no previous hæmorrhage or symptom pointing to placenta prævia. There was no appreciable contraction of the womb and not a particle of pain, but there was considerable tenderness over a circumscribed area about the size of a well-developed placenta at this period of gestation, in right hypogastric region above the zone, designated by Barnes as that of "safe attachment." From what source did the hæmorrhage proceed? After a review of all the points, the only conclusion I could come to was that the jar from the fall had detached a portion of the placenta, probably only the portion that may have extended below the imaginary line of Barnes, and then imperceptible contractions sufficient to seal

up the mouths of the bleeding vessels. But could the placenta become detached to such an extent as to produce such profuse hæmorrhage without exciting very perceptible contractions? And is it possible for such an extensive surface of separated placenta to become re-united to the uterine wall, at least without any abnormal symptom?

The treatment consisted in absolute rest in the horizontal position, with head lowered, and fifteen drops of fluid extract of ergot combined with eight drops of tincture opii, every half hour for a few hours, with cold to abdomen, which gradually checked the hæmorrhage until it entirely ceased. There was no concealed hæmorrhage in this case, which is the usual form of these accidental hæmorrhages that I have met with. Keeping the patient confined to bed for ten days only, and that much against her will, for she wanted to get up and pursue her daily course of duties the next day. Gestation continued to full term without interruption or an untoward symptom, which occurred on June 8—just three months, less seven days, from the fall. She was delivered of a well-developed boy weighing ten and a half pounds in the nude state. The mother made a rapid recovery, and at this writing (one year since the accident), she and child are both vigorous and healthy.

There are a few points in this case that are worthy of study, and of considerable interest: (1) The excessive loss of blood, producing no depression of the circulation. It is true, after the cessation of the hæmorrhage, there was a slight rise of temperature, and the pulse went up to 100 for a few hours only, showing some re-action. (2) The continuance of gestation without in the least impairing the viability or checking the full development of the fœtus. (3) The source of the hæmorrhage. (4) The entire absence of uterine contractions under such provocation. The opium was given, as stated in a published paper on "quinia as an oxytocic," simply to modify the effects of the ergot, and the latter to arrest the hæmorrhage; in the same paper I stated that I had often prevented miscarriage by small and repeated doses of ergot guarded by opium. Thinking it a case of

rare occurrence and unique in character, I report it with the hope that some one can and will explain the phenomena presented in this case better than I have done.

Case XIII.—A case of spontaneous rupture of the abdominal wall into the cavity, produced by tympanitic distention of intestines. Nancy Hopkins, colored, aged 18, unmarried; occupation, house servant to Mrs. M. S. Hopkins, and formerly her slave. As I have never been able to find on record any case of this accident, and though it occurred several years since (in 1867), on this account I report it. At night a negro messenger came to me saying, "Miss Patsy says come and see Nancy—she 's busted;" which to my surprise I found was literally true. I found the girl in her mistress' room; the lady was watching her closely, being very much alarmed for the safety of a favorite servant. On examination there was a rupture of the right abdominal wall running parallel with the outer border of the recti abdominalis, five and one half inches in length, and opening the abdominal cavity. The ascending and transverse colons were enormously distended with gas, and probably all the intestines. The edges of the wound thus made were pale and bloodless; only an oozing of a little bloody serum. I ascertained by close questioning that the girl was about three months advanced in pregnancy, which, for obvious reasons, she at first denied. The history of the case was about this: She had been dyspeptic, anæmic and a great sufferer from indigestion for several weeks, with œdema of the lower extremities. That evening she complained of colicky distention of the bowels, for which her mistress had prescribed several simple remedies; but the distention continued to increase until about 10 P. M., when the rupture occurred and I was sent for. Turpentine *per orem*, and the same combined with emulsion of assafœtida by enema, was administered, and a large quantity of gas expelled with the enema, which was repeated until the distention in the bowels was greatly lessened. Eight interrupted silk sutures were then introduced including the peritoneum, and the rent closed and dressed with cold water compress and light abdominal band-

age. The wound closed kindly without suppuration, and with proper dietary and medical treatment addressed to the anæmic condition, she soon recovered. But two months afterward, from her own act, through shame on account of her illegal condition she miscarried at about six months, from which she, however, recovered, notwithstanding a profuse hæmorrhage; and is at this time in good health, and has married and borne three living children since. Dr. T. F. Clardy, of Oak Grove, Ky., an intelligent and accomplished physician, who was visiting a patient on the same farm at the time, by my request saw the patient the next day after the accident, and examined the wound as to its extent, to whom the incredulous are referred.

POST-PARTUM HÆMORRHAGE.

This dangerous complication of parturition has within the past few years received several additions to its therapeutics. The intra-uterine injection of that so-called most powerful hæmostatic, persulphate of iron in solution, has, since the indorsement of the great English obstetrician, Barnes, become a very common practice. But notwithstanding the high authority, I must say a very dangerous practice in some cases; and judging by some little experience in its use thus applied to the bleeding walls of the uterus, we are unable to select beforehand the proper cases if there really are any such. In two cases of labor at term, uncomplicated by placenta prævia or any pathological condition especially contra-indicating its use, death was the result in one and a very narrow escape from the same result in the other, it setting up pelvic peritonitis with metritis, and followed by cellulitis and pelvic abscess, which was opened into the vagina. It evidently hardens the clots formed by its styptic action too firmly, and they, aside from the danger of its entering the peritoneal cavity, prove an irritant. I have in two other cases, treated since, succeeded as promptly in arresting the hæmorrhage by mopping the whole internal surface of the uterus with a large mop saturated with a somewhat stronger solution than that usually recommended for injection; but I would not resort to its use in any case until other less dan-

gerous methods had failed; but am sure that the mop is equal to the syringe.

My friend, Dr. John O. McReynolds, of Elkton, Ky., an able, experienced gynæcologist and obstetrician, in a verbal address before the Kentucky Medical Society at Hopkinsville, in 1876, stated as a discovery of his that the intra-uterine injection of the solution of persulphate of iron would arrest after-pains; how bold such practice for so simple and physiological a trouble! when, if their arrest is necessary, a single dose of morphia is often sufficient for the purpose. In a recent article in the *Louisville Medical News*, Dr. McReynolds gives his experience with it in post-partum hæmorrhage, which from his own statement is very unfavorable, losing one patient out of three, whose death he attributes to the intra-uterine injection of this agent; but with this experience, the doctor only seems to consider it contra-indicated in hæmorrhages following premature labors, as the case he lost was one of miscarriage. If fatal at any stage of gestation, why not at term? I have succeeded in one case, with a promptness never experienced by any other treatment, with injections of hot water thrown freely into the womb; though one case is no criterion by which to establish a general practice, yet from long experience with hot water as one, if not the best astringent (and I may add the best that is always procurable), I believe that it will succeed physiologically oftener than any other remedy. From its astringent effects persistently applied by stimulating contraction of the muscular fibre in general and its soothing and harmless properties, it certainly exercises more control over local inflammations than any other application. There is no remedy equal to a two hours' immersion in hot water kept at the highest temperature bearable by the patient in recent sprains. Dr. Hyatt's plan as published, I believe, in the *Virginia Monthly*, of introducing India-rubber bags into the womb while collapsed, and then inflating them with air or water, is altogether mechanical and opposed to nature's plan of closing the bleeding mouths of the blood-vessels, by contracting around them the muscular fibres; it is opposed to the mechanism of the

womb by preventing it from performing its natural function of contraction, keeping its walls distended and consequently the mouths of the blood-vessels open. Its principle of action is the same as the persulphate of iron, which coagulates the blood and fills the womb with firm clots which are difficult to remove, and when removed in any other way than by the contraction of the organ (which is often the case), it of itself endangers the re-opening of the blood-vessels because they have been only mechanically and not physiologically closed. The old method so philosophically and urgently advocated by Tyler Smith, of exciting a reflex stimulation to the inert womb, has seldom failed in my hands, even in most extreme cases. As illustrative, I will present a case of this character:

Case XIV.—Harriet Catlett, very bright mulatto, aged 35; subject to hysteria; of delicate build. Had a miscarriage at five months; hour-glass contraction with two placentæ retained above the annular contraction; hæmorrhage immense. This was her fifth abortion, each time with attached placenta and considerable hæmorrhage. Much time was lost in the effort to dilate the annular contraction so as to detach the placentæ, without sucess, during which the patient became almost exsanguined from the continued loss of blood, notwithstanding cold compresses, kneading the womb, etc., had been kept up; while position was used as aid, when ergot was freely administered, the vagina packed with ice, astringents given *per orem*, with injections of alum into the cervix but without reaching the fundus, and in fact all the usual appliances then known to the profession were tried, but all were nil. Persulphate of iron had not then (1860) been introduced into general use, neither had Dr. Hyatt's India-rubber bags; but what good could either have done in this case? Patient speechless and pulseless. Having just read Tyler Smith's excellent lectures on obstetrics, I placed four exhausted tumblers from lower end of sacrum upward as close together as I could get them, as the last and only hope of saving her life. The result was the instant balling up of the uterus and relaxation of the hour-glass contraction, so as to

admit a hand with which the placentæ were detached. The contractions were so powerful and rapid, that while withdrawing the hand after detachment of the placentæ, it was grasped with such force as to paralyze the whole arm for a few moments, or while the after pain lasted. Both placentæ were expelled and the womb firmly contracted. Pulse returning in the radial artery, there remained nothing to do but to keep the patient alive by food and stimulation. Whisky and broths were administered *per rectum* until the patient regained sufficient strength to swallow, when whisky was given ad libitum, patient taking over a half-gallon in twelve hours without producing the least effect upon the cerebral functions. Dry cupping to the lower spine will often succeed when other means fail; recently it succeeded in arresting a very alarming case of post-partum hæmorrhage after the free use of Squibb's and Tilden's fluid extract of ergot (both internally and hypodermically), with intra-uterine titillations, kneading the abdomen, lowering the head and constant cold applications over the womb, had failed.

THE USE OF THE FORCEPS IN OBSTETRIC PRACTICE

Is becoming too fashionable; I am forced to this conclusion from a rather large obstetrical practice, extending over a period of twenty years, during which time I have seldom found their aid necessary. I believe there are many cases of tardy labor caused by uterine inertia, when a well-timed dose of some of the so-called oxytocics and dry cups to the spine would stimulate the uterus sufficiently to enable nature to complete the labor, in which they are resorted to unnecessarily. In other cases, when labor is prolonged with an apparent arrest of the head at the superior strait, in which the pains are continuous but inefficient, with a slightly dilated but dilatable os in which the forceps are used, that would be relieved and the labor proceed to a successful termination by the timely administration of opium and leaving the case to nature. I have never had cause to apply the forceps in but two cases of the high operation, and now believe that both cases would have done better had I given opium, followed by ergot; though both were successfully delivered and recovered, yet I

would not again in the same character of cases so hastily resort to the use of the forceps. I speak of the high operation as especially to be avoided if possible, not that the forceps are not a most valuable aid in a few cases, and in some indispensable to the safety of both mother and child, but they are used in many cases unnecessarily, cases in which proper therapeutics would enable nature to accomplish her work without their aid, and of course, without the attendant dangers incident to their use; and it can not be denied that these exist even in the hands of the most skillful. I have operated several times for ruptured perineum, and am cognizant of many more operations in the practice of others, and can not now recall a single case that was not the result of forceps delivery. Many cases of vesico-vaginal fistula are to be charged to the use of forceps; nevertheless many writers and experienced obstetricians advocate their adoption in almost any case of retarded labor, from no matter what cause, to facilitate the parturition and shorten the woman's sufferings, as they say. With chloroform, that special boon to the parturient woman, we can without harm accomplish the latter and with it there is no necessity for the former except as regards the accoucher's time, which is of small moment when weighed against the great risk to the mother and often to the child by forceps delivery, except when the head is near the perineum. Dr. Harrold Williams, of Boston, in a graduating thesis has shown by statistical tables drawn from 244 cases of the high forceps operation and Cæsarean section inclusive (of which 125 were of the latter and 119 of the former operation), that the high forceps operation is more dangerous to the mother than Cæsarean section. The conclusion that his tables mathematically demonstrate is, "that Cæsarean section is 51 per cent. more favorable to the child than the high forceps operation, and 10 per cent. more favorable to the mother;" "that if the Cæsarean section is resorted to early—within twenty-four hours—it is 16 per cent. more favorable to the mother than the high forceps operation, or 6 per cent. more favorable than if delayed forty hours." "That the high forceps operation should be undertaken with

the greatest hesitation, inasmuch as its results are more fatal to the mother than those of Cæsarean section, while the prognosis as to the child is far better in the latter." And finally, "when the question arises as to what operation will give the best chance to both mother and child, the choice must lie between Cæsarean section and turning." While on this subject permit me to enter my humble protest against the indiscriminate use of ergot in any and every case of prolonged labor; I have seen much harm result to the child from its administration too early in the progress of the case, and there are many still-born children due to this cause alone; and too often in the hands of the hasty accoucher—to say the least—often great damage is done the mother, and occasionally death has been produced by its administration before the cervix was sufficiently dilated or easily dilatable. It is really unsafe to give ergot except in the last stage of labor. In two cases I have known death to result from the improper use of ergot in large doses administered by regular M. D.'s, and in one case was called in consultation only in time to find on post-mortem examination a rupture of the left wall of the uterus, eight inches in length, with the escape of the child into the abdominal cavity, which was distended with blood. I am aware such facts are well known to the profession, but they can not be brought to mind too often, especially to the younger members.

ERGOT IN INTRA-UTERINE GROWTHS

Is attracting the attention of the profession at present as a means of avoiding operative procedure.

Case XV.—Mrs. A. C., multipara, had been suffering with excessive metrorrhagia for two years; anæmic, with extreme emaciation and debility, notwithstanding the treatment pursued by her physicians, of iron almost constantly and variously combined with other tonics, with astringent vaginal injections and gallic acid internally. On May 10, 1877, I was consulted in regard to her condition, after receiving the above history; an examination was requested, suggesting that the hæmorrhage was probably due to some growth within the womb. On the introduction of a sound through the

internal os it met with resistance, but by manipulation could be passed on either side or all around the base, as it seemed, of a pendulous tumor. After three days occupied in dilating the cervix with tents and dilators, a thorough exploration was made with two fingers, which convinced me of the polypoid character of the tumor, at least as to shape, and that its pedicle was attached to the fundus. At this juncture, however, the hæmorrhage became so free that all further manipulations were suspended, and teaspoonful doses of fluid extract ergot administered for the purpose only of checking the flow; but in a few hours violent contractions of the uterus set up, accompanied by considerable pain, and an encysted tumor was expelled into the vagina; removing it, the cavity of the womb was thoroughly mopped out with a solution of persulphate of iron, and the ergot repeated. The hæmorrhage ceased and has never since caused any trouble. She rapidly regained her health, strength, flesh and color under appropriate treatment, and at present is in good health. The exact character of this tumor is unknown to me.

The country doctor often learns many valuable remedies from the old women that are never known to his city brother, or if so, long after such knowledge has been in the possession of the former. *Phoradendron flavescens* (common mistletoe) has only recently attracted attention as one of the so-called oxytocics, through the report made of it by Dr. Long, of Louisville, in a very lucid and correct description of its action published in the *Medical News*. Though new to the doctor until made known to him by the farmers, yet it has long been used by the old midwives in some parts of the country, and through them was known as such an agent to the writer. The same is the case with *Ustilago maidis* (corn smut), wheat smut and the nest of the common mud-dauber, all of which I have tested, and know that each possesses more or less of this power over the parturient womb. From some experiments made recently with this class of agents, I am inclined to think that all the vegetable parasites possess this property, even the moss growing upon the forest trees of the Southern States included, and have written to a friend

to send me a sample to test. Many of the fungus vegetable growths possess the same property. From considerable experience with corn smut, I believe it in most cases the best of the class, and decidedly more safe for general use than ergot; but none of the class can, however, take the place of this drug as a hæmostatic and contractor of the capillaries, or in uterine fibroids, polypi, etc., on account of its power to contract muscular fibre and thus diminish the caliber of the arterioles. Ergot will some day be recognized as *the* therapeutic agent in the treatment of that formidable malady, puerperal eclampsia. It has been already suggested to the writer (November 10, 1877) as a remedy in this disease by Dr. E. F. Wills, of Minister, Ohio, but upon what grounds he does not state.

CRANIOTOMY WITH IMPROVISED INSTRUMENTS.

Case XVI.—Mrs. Henrietta A., primipara, aged 16, height four feet six inches, weight 165 pounds, of very compact build. Was taken in labor on the night of October 14, 1862. Her residence distant six miles from my office. On arrival I found her with pains so frequent as to be almost continuous, and extremely violent. I was informed by her mother in-law that they had been so from the first—some time before I was sent for. On examination found but little if any progress in the labor; cervix only about the size of a shilling-piece. The labor continued thus violent up to the night of the 15th—24 hours—during which time, although the cervix was fully dilated, there was but small advance of the head; she, in the meantime, having consumed by inhalation one pound of chloroform and lost twenty ounces of blood by venesection. Concluding that the head was abnormally large or the pelvis contracted, the dimensions of the latter were estimated as accurately as the circumstances would admit. I found that each diameter was about natural, perhaps somewhat less than the average, but ample for an ordinary head, or within a fraction of the following: antero-posterior 4 inches, oblique 4½ inches, transverse 5 inches. But the head being movable, and having no forceps or obstetrical instruments of any kind, and the distance to the

nearest physician being nine miles, I concluded to wait on the desperate efforts of the womb, and prevent exhaustion by the free use of chloroform, which I did for twelve hours longer (36 hours to this time, 12 M., 16th). Thinking that my patient would die from exhaustion if not soon delivered, and that nature could not complete the labor, three messengers were dispatched in as many directions in search of instruments for performing craniotomy, for it had now become evident that the fœtal occipito-frontal diameter was far greater than the most capacious pelvis, and the head already impacted to such a degree as to prevent the application of forceps. I addressed notes to six different medical gentlemen requesting their presence provided they could bring with them the proper instruments; if not their presence was unnecessary. The head was presenting in the usual occipito-anterior position, the patient was still in the most violent throes of labor I have ever witnessed before or since, the cervical muscles and vessels enlarging at each pain to the size of the wrist, the eyes turgid and appearing as if they would burst from their sockets, notwithstanding the continued inhalation of chloroform. As hour after hour slowly passed I became somewhat desperate from anxiety and witnessing such intense agony without the power to give relief, put "mother wit" to work to devise some way out of the difficulty, or in other words to improvise some instrument with which I could perform craniotomy—no matter then how rudely. Seeing a "kitchen lamp" made of iron terminating at the upper extremity in a hook by which to suspend the lamp, I concluded it would answer the purpose of a crotchet. I asked for a hammer and chisel and with these tools the handle was detached from the lamp-pan. Then requesting the husband's mother to furnish me a pair of tailor's shears with both blades sharp-pointed (which fortunately she could do), a tablespoon and small bowl were called for, the iron hook wrapped carefully with cloth and well oiled to prevent injury to the mother's soft parts, and I was prepared to perform the murderous operation, and was just proceeding to the perpetration of the deed when one of the messengers returned ac-

companied by one of the M. D.'s written to, and who apologetically said, "I have no instruments but thought I could possibly aid you in some way." The other gentlemen returned the answer that they had no instruments. After the gentleman who was so kind as to come had made an examination and found the head impacted, heard the history of the case—the woman exhausted by nearly ninety hours of continuous labor—he insisted that I should still wait awhile on nature's efforts. Declining to do so, the patient was placed in the forceps position, the bowels having been freely evacuated shortly before (naturally), the following operation was performed with the above-described instruments: Complete anæsthesia being now induced, the fontanel was found with the fingers of the left hand, the closed blades of the tailor's shears (small size) were introduced with the right hand into the vagina along the palmar surface of the left, by which they were guided and their points guarded to the mole and pushed into the brain, breaking up the entire cerebral tissue by a rotary motion of the shears, and at the same time enlarging the fontanel as much as possible by grinding off the edges of the bones. The iron hook was then carefully guided to this opening, and caught firmly on the inner surface of the frontal, and to each parietal, bone successively, but the strongest traction of which I was capable proved unavailing to force out the brain tissue, and consequently compress the cranium. I had, however, anticipated the difficulty of evacuating the contents of the cranium, and after enlarging the opening sufficient to admit the spoon, which was already at hand, and with which the brain was scooped out and placed in the bowl. After removing all I could in this way, the hook was again introduced and traction exerted to the fullest extent when the bones collapsed; and aided as I was by the powerful uterine contraction the child was rapidly delivered. After the mother had received proper attention the child was weighed, balancing the scales at thirteen pounds, but the head was the point of interest. The cavity of the cranium was filled with dry beans and hot water poured in on them until by their swelling the scalp was fully

distended. The head measured from occipital protuberance to center of forehead, eleven and a half inches, but only three and a half inches from one parietal protuberance to the other—a regular monstrosity. She was in labor fully ninety hours and consumed nearly three pounds of chloroform. She recovered slowly but surely, and I delivered her of three children afterwárd, all natural labors. She is now the mother of five living children, two born since she left this county and removed to Graves, in this State. The mother's life was preserved temporarily by chloroform, and permanently, humanly speaking, by the operation.

This case is reported principally to show the tolerance of the system to chloroform in obstetrical cases, and to show what necessity can accomplish under adverse circumstances, and what a formidable operation may be performed without the aid of the instrument-makers. From the date of this case (1862) to the present time I have used anæsthetics in obstetrical practice in every case where the patient or family did not object to their use. Chloroform is the best and I consider it perfectly safe in many cases of labor, but it should be given only in the last stage.

Case XVII.—On March 12, 1879, I was sent for to see Kitty Killabrew, colored, aged 22, nullipara and married four years. It not being convenient to go at once, a few questions were asked her husband as to her present attack. Having been consulted by him two months prior in regard to a suppression of her catamenia which he stated occurred last August, and that she had "seen nothing since," but was not pregnant, "tincture antacrid" combined with tincture guaiacum was prescribed; had heard nothing from her since this prescription—about the first of January, 1879. Ascertaining from him at the present visit that his wife's "period" had appeared the day before for the first time since she had been taking the medicine, "but that it was accompanied with great pain in her womb", I concluded the pain was neuralgic in character and three powders of morphia (quarter-grain each) were sent to her with direction to take one every two hours until the pain was relieved, and I would see

her that evening. On visiting the patient I found her with regular intermitting labor pains, notwithstanding two doses of the morphia had been taken. From the character of the pain I suspected a miscarriage, though the history of the case did not justify such an idea, and on careful palpation of the belly, which was flat, no uterine enlargement could be detected. A vaginal examination between the pains revealed the os dilated barely sufficient to admit the index finger. The uterus was found somewhat enlarged and its cavity filled with a fleshy feeling tumor around the presenting part for one-half an inch, when by moving the finger around this portion between the tumor and the uterine walls, I found it firmly attached to, and seemingly imbedded in, the walls of the organ. Still being in doubt as to the nature of the case, and the tumor imparting to the sense of touch somewhat the feeling of the uterine placental surface, morphia was ordered in small doses, perfect quiet enjoined, and I left the patient to visit others in the neighborhood. On returning several hours after found the patient in the same condition, pains as violent as before regardless of the opiate, but no further dilation of the os. I now determined to empty the womb of its contents if possible. The smallest sized Barnes's dilator was introduced and inflated to the utmost extent possible with the rigid condition of the cervix, with instructions to the mother (herself an old midwife) if anything passed from her to save it all carefully and send for me. I should have stated that from the first there was only a moderate amount of hæmorrhage. Hearing nothing from her and being detained by an obstetrical case, I did not see her until 3 P. M. the next day, when she was still suffering with regular labor pains. The os was only dilated sufficiently to easily admit the index and middle fingers. The tumor was found adherent to the entire uterine cavity and completely filling it; but by considerable effort I found it could be enucleated by the fingers as far as they could reach toward the fundus. A larger dilator was introduced and a teaspoonful of fluid extract ergot given and repeated in half-hour and the woman watched. After the third dose the pains were greatly in-

creased, and at the expiration of four hours, a round, oblong mass, the exact mold of the uterine cavity, was expelled, showing a pedicular attachment to the fundus; the cavity of the womb was immediately explored to the fundus with the fingers, but not a vestige of anything else was found in it. The hæmorrhage was slight even after the expulsion of the tumor; on examination of which, however, it was found rolled upon itself like a roll of paper, with its two borders pressing against each other. On opening it the inner rolled surface was covered with a thin, serous membrane, beneath which was a thick network of veins ramifying the whole surface, and presenting the exact appearance and rounded shape when spread open of a five month's placenta. But the uterine surface resembled, to both sight and touch, that of fresh beefsteak; was very dense on cutting into it, showing distinct muscular tissue. There was no attachment of an umbilical cord or the site where one had been attached. I can make it out to resemble no growth so much as a placenta and believe it was one, yet there was no fœtus, no cord, no bag of water and no membranes. Then the history of the case, having a suppression of the catamenia for over seven months in a healthy, robust woman—for such she was—with no abdominal or mammary enlargement or other signs of pregnancy, renders it a very interesting and unique case, and as such it is reported. It occurred just as this paper was being completed, and is added to it on account of the peculiar phenomenon it presents for solution, hoping that some one may unravel this, to me, unprecedented freak of nature. From some of the symptoms described in this case it may be inferred that this is a so-called "mole," but for the benefit of those who could not see and examine it, let me say I have seen many moles, or as they are considered, "blasted conceptions," and this does not belong to that class.

ACCORDING to a recent decision of the Prussian court at Trier, Dr. Frederick Koenig, of Prüm, Sanitary Officer and District Physician, was mulct in damages to the amount of six hundred marks and costs for having inoculated a child with syphilis conveyed by vaccination.—*Anzeiger des Westens.*

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I. *Cholera—A True Neurosis.* By HENRY RAYMOND ROGERS, M. D.

In the study of this mysterious disease, physicians in all the ages have been but too apt to allow themselves to be guided by the literal evidences of their senses, and the superficial appearance of things.

The prominent symptoms disclosed by the *primæ viæ* have caused those parts to be regarded as the primary location of the disease. Nothing can be more erroneous in fact or more misleading in practice. It is, therefore, not surprising that every form of treatment employed, until a recent period, has resulted in failure. Success in its future management must, therefore, depend upon a better appreciation of its intimate nature, and a truer conception of the mode of its operation upon the human system.

The fact that this disease is capable of making its invasion and proceeding to a fatal termination in the space of twenty or thirty minutes, is conclusive evidence against the theory of germs, decompositions, or specific poisons. We are thus led to regard it as a true neurosis. A careful review of its prominent symptoms abundantly sustains this conclusion.

The distinguishing characteristic in this disease is the reversal of the action of the mucous surfaces of the stomach and intestines. The normal action of those surfaces is to take up the fluid contents of those organs, and to convey the same on their way to the systemic circulating current in the blood-vessels. In this disease this normal process (termed endosmosis) gives place to a reverse current in which the watery element of the blood passes with greater or less rapidity into those cavities. This element constitutes the so-called rice-water evacuations.

These transudations into the stomach and intestinal canal, in their profuseness and painlessness, can by no possibility occur, except that the nerves, whose office it is to preside over the parts implicated, fail to perform their functions in a

normal manner. No fluid, however attenuated, can make its way through the walls of the blood-vessels while the latter preserve their integrity. Thus the unlocking of the exhalent orifices of the blood-vessels, permitting the rapid infiltration into the stomach and intestinal canal of the finer elements of the blood and sometimes of the blood itself, is a positive evidence of a perturbation in the action of the nerves which supply the vessels and membranes through which the infiltration takes place.

The cramps arise from purely nervous causes; the vomiting is simply regurgitative; collapse may occur from the initial force of the disease, although most frequently due to the diminished volume of the vital current. In rapidly fatal cases the disease expends itself wholly upon the brain and nervous system, and death occurs before other organic changes can have taken place. After death no constant and uniform changes are found in the fluids or tissues of the body which can be regarded as the cause or the products of the disease.

We may, therefore, consistently ignore all previous theories, and discard all forms of treatment which have been so fruitless in results, and seek some other philosophy which shall better account for the conditions observed, and some other treatment which may prove more successful.

In viewing this disease from a neurological standpoint, the treatment emerges from the pure empiricism which has ever characterized it and becomes thoroughly scientific. It also becomes the perfection of simplicity.

In the treatment of this disease there are two great and leading indications to be observed: First, to change the perturbed condition of the nervous system, and thus shut down the flood-gates through which the life ebbs away; and second, to ward off the effects of the exhaustive drain upon the vital current. The first may be accomplished by the hypodermic injections of morphia, and the second by position.

It can not be too firmly impressed upon the professional mind that the rapid diminution of the volume of blood, through exudation, is attended by the same results which fol-

low a true, active hæmorrhage. From the commencement of this disease this exudation is in progress in a manifest or a concealed form, and with greater or less rapidity, and demands the precautions and treatment due to active hæmorrhage.

In the hypodermic form of medication there is certainty of a retention of the remedies employed, and promptness and efficiency in their action—a very marked contrast with all other forms of treatment which have ever been employed. The commendation of this method by those who have employed it is expressed in the strongest terms. The reports of cases thus treated in Asia, Europe, Australia and in various portions of our own country show almost uniformly favorable results.

The following treatment was employed with successful results in my latest cases—twelve in number—the most of which were grave and typical:

(1) The hypodermic use of morphia, administered according to the age and condition of the patient, usually in quantity of one-eighth to one-quarter of a grain, and not frequently repeated. (2) The horizontal position, or with the head lower than the body. (3) For the mouth nothing but ice, and that ad libitum. When this can not be obtained, the coldest water may be given, and frequently repeated, in small quantities. (4) External heat, frictions, etc.

The following case, illustrating the above treatment, may be deemed apropos: Mr. T. was seized at midnight, and at early morning was found to be on the verge of collapse. In his condition of almost complete exhaustion, with pulse almost imperceptible, the use of morphia was contra-indicated. The first duty, therefore, was to stimulate the brain and heart to action by sending to those organs a current of blood by gravitation. The head was quickly placed many inches lower than the body and extremities, and the other measures resorted to. At the end of one hour the pulse had perceptibly improved, and a quarter of a grain of morphia was hypodermically administered. The inclined position was continued several hours. The result was favorable.

The same treatment applied to cholera morbus is also prompt and favorable in its results.

A more full explanation of the views of the writer regarding the origin, dissemination, pathology and treatment of this disease may be found in the "Transactions of the American Medical Association," 1876.—*Hospital Gazette.*

ART. II. *Injection of Ammonia into the Veins as a Means of Resuscitation in Alcoholic and Narcotic Poisoning.*

The idea that the ammonia generated in the blood in the process of nutrition is for the purpose of acting as a solvent —that is, for the holding together the other constituents— seems probable from the fact that the rapid escape of ammonia* by evaporation from freshly drawn blood, and its dissipation in the atmosphere, proceeds *pari passu* with the coagulation of the blood. It seems to show that they stand in the relation of cause and effect.

The immediate tendency of the blood to coagulate as soon as it is withdrawn from the body—that is, for its component parts to separate—certainly leads to the conclusion that its several constituents are only very lightly held together, even when within the body. That temperature, motion and the exclusion of air, either separately or in conjunction, are the chief agents in sustaining the fluidity of the blood is very doubtful; for when we see the wide range of temperature, with the sometimes sudden alternations to which the blood is subjected, and, when again we find it can also more than double its speed without influencing its consistence, we can hardly think that these two—motion and temperature—are the controlling powers sustaining its fluidity.

Then, as to the exclusion of air, that can not of itself be the cause, as the following experiment shows: The jugular vein of a dog was tied, and a ligature passed round it two places. The blood inclosed between the two ligatures was found in less than an hour to have undergone decomposing changes, for on a slit being made into the vein, an escape of air and partly coagulated blood followed.

---

*See Dr. Richardson on Coagulation of the Blood, p. 283.

To what extent the impairment of this essential condition for carrying on of life—namely, the perfect fluidity of the blood—occurs, and under what circumstances, has not been made the subject of investigation; but that there are some forms of dying whose modus operandi is through a gradual thickening of the blood, producing a slow and yet slower circulation until complete stoppage occurs, is probable, although an examination of the blood-vessels after death does not reveal it. It is no sufficient answer to this supposition to say we ought to find them choked and full of clotted blood. Arguing from the fact that two minutes suffice for the complete coagulation of freshly drawn blood from a living subject, and that the subsequent steps in the process of disintegration of that blood are equally rapid, we ought rather to conclude that the condition of the blood in the veins and capillaries of a person who has been dead but an hour is probably very considerably altered from what it was at the moment of death, and that the arteries being empty and viscid blood being found in the veins, are no evidences of what was the actual condition of the circulating fluid when the heart ceased to pulsate and the lungs to respire.

In the beginning of 1878 I was making some experiments with fresh animal blood, and repeated many of those of Dr. Richardson. The power of ammonia to suspend coagulation was fully confirmed in these experiments. It suggested the thought that the elimination of latent ammonia, by its ready volatility, was the first step in the process of disintegration of the blood. But it was not until the following case occurred that the further thought arose that possibly the action of some poisons when taken into the system was that of stiffening or thickening the blood, if such a term might be applied to a diminished fluidity, the result of an arrested vital force leading to an arrested supply of an ingredient necessary to the maintenance of fluidity. Might not that ingredient be ammonia?

In apoplexy and in fracures of the skull with effusion of blood, where it was formerly thought that the clot of blood was by its pressure alone the cause of death, it is more prob-

able that a progressive clotting of the blood in all the vessels in the neighborhood sets in, and the circulation of the blood becomes arrested from this cause over an ever-widening area, until death ensues. The engorged state of all the blood-vessels of the brain found after death favors this view. In such cases death has occurred too soon for the further disintegration of the blood and the escape of its serum, but there are numerous other diseases where the arrest of the circulation or an impediment to it leads to a separation of the fibrin and serum, and the infiltration of the latter into the tissues or into cavities. Serous apoplexy, ascites and anasarca are familiar instances.

The property of holding together in uniform admixture the constituents of the blood must be lodged in certain elements which are themselves the product of nutrition. This being so, we may go further and assert that there occur certain conditions of the blood as the result of abnormal nutrition or of blood-poisoning where these necessary elements are deficient, or at least not present in sufficient quantity to hold intermixed the other constituents. Is this what happens in alcoholic and narcotic poisoning? Are nitrogen and hydrogen, combined in the form of ammonia, the elements wanting? If they are, it affords an explanation of the good effect of the introduction of the latter directly into the blood in the case now to be related:

S. C——, aged fifty-two, living in a neighboring street. I was called to her on March 6, 1878, at 7:30 A. M. I found her lying on a sofa insensible, having all the appearance of stupor from drink. Her history was that of a confirmed drunkard. Her face had a very bloated appearance. She had risen an hour or two before and gone to an adjoining public-house, and been supplied with drink—rum or brandy—had come home and lain down on the sofa, and the children after a time being unable to arouse her, sent for me. There were contusions on various parts of the head and face, which gave rise to a suspicion of ill usage as well. By shaking and shouting to her she would partly open her eyes. Mustard plasters were applied to neck and calves, and at-

tempts made to get her to swallow a little coffee, but without success. I then had her removed to the hospital, to which she was conveyed perfectly insensible in a cab. Here galvanism and the stomach-pump were freely used without rousing her in the slightest. She was then removed to bed in a private ward.

At 11 o'clock I saw her again. She was quite comatose, pupils contracted, pulse feeble and flickering, and skin moist and perspiring. All attempts at rousing her failed.

At 1 P. M. I saw her again. The pulse had now become so feeble as to be scarcely perceptible; her lips and tongue were livid and cold; there was a frothy secretion of mucus from the mouth, and peculiar changes of color passed over her countenance, which seemed to indicate the nearness of the end. I left her with the impression that in a few minutes pulse and breath would stop. Going down stairs with Mr. Gwatkin, the senior house-surgeon, discussing the case, he threw out the suggestion to try the injection of a little ammonia into one of the veins, a proposal to which I gladly acceded, and having obtained some strong solution of ammonia from the dispensary, I returned to the ward and injected with a hypodermic syringe ten drops into the mediocephalic vein of the right arm. The effect was striking. In a few moments she moved slightly—an uneasy, restless motion—and soon after on being shaken and spoken to, partly opened her eyes and turned her head. The most marked change was in the pulse and mouth. The former, which was not to be felt just before the operation, could now be detected and after a time counted, while the mucous membrane of the mouth and tongue became almost immediately of a natural color.

She slowly recovered consciousness. In the evening when I saw her again she had so far rallied as to be able to swallow. She complained much of her arm. The skin over the injected vein subsequently sloughed. Her recovery was slow, due to the intemperate life she had led, and to the ill usage of a brutal husband, every part of her body being covered with bruises and contusions.

I have delayed the publication of the above remarks for several months with the hope of being able to give further illustration of the effect of ammonia injection. Quite recently a woman was brought into the hospital poisoned by drinking carbolic acid. The case was apparently hopeless, when the house-surgeon injected solution of ammonia into the veins of her arm, and the woman recovered.—*Robert Hamilton in London Lancet.*

ABSTRACT DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."

CONDUCTED BY EDWARD MILLER, M. D., LOUISVILLE, KY.

EPITHELIOMA OF THE PENIS. By W. W. DAWSON, M. D. —Carcinoma of the penis is a disease that is by no means uncommon. If surgeons were gifted with unerring powers of diagnosis, cases of advanced ephithelioma would rarely present themselves, as the disease is entirely curable if the knife is used early. Even when the lesion has existed for some time without any perceptible involvement of the inguinal glands, a cure has been effected by the prompt and free excision of all the cancerous mass. From this it appears that Dr. Dawson, as he states, looks with more faith and favor every day upon the theory of the local origin of cancer as taught by Billroth. Where the glands are all involved and the organ extensively diseased, a cure by the knife or any thing else, whether used externally or internally, is out of the question. The object of the operation in such cases is not to cure the disease, but to take away a foul, offensive tumor, to relieve the pain, which is sometimes intense, and to so shape the stump and urethra as to do away with the possibility of mechanical retention of urine. Life is thus prolonged and rendered less painful. Most surgical authorities direct the end of the organ to be grasped with the left hand, and then with one sweep of the knife in the right hand the diseased portion is sliced off. This is not the operation Dr. Dawson prefers. He cuts through the skin all around, retracts it, and then cuts through the body of the organ with the ecra-

seur. He cuts far enough back to avoid diseased tissue, and escapes all danger of hæmorrhage by using the ecraseur. Having stitched the edges of the urethra to the skin (the urethra being slit sufficiently to allow a free opening), the operation is complete. The various modifications of this operation all have for their object the keeping open of the cut end of the urethra, it being liable to close by the contraction of the healing and healed tissues. Cancer of the penis is almost always epithelial, and occurs usually after middle life. In the early stage it may be confounded with hard or soft chancre, usually the former. If the little hard, nodular tumor with its ulcer scabs over, sheds the scab, scabs again, and again crusts over, meanwhile enlarging in spite of all treatment, there is good reason to believe it to be an epithelial cancer, and, no more time being wasted in medication, the operation for its removal should be at once performed.—*Hospital Gazette.*

Incontinence and Retention of Urine in Children. By W. F. Teevan, B. A., F. R. C. S.—Incontinence of urine affects not only male but female children. Its causation is often difficult to elucidate and its treatment is unsatisfactory. The medical phenomena of the complaint are often inscrutable and the treatment empirical, but where the cause is surgical a cure may usually be effected without delay. The surgical causes that may give rise to incontinence are: (1) Rectal complaints, such as piles, fistula, excoriations; (2) ascarides; (3) a tight fore-skin; (4) congenital insufficiency of the external urethral orifice; (5) a calculus impacted in the urethra. All of these causes set up and keep up irritation, and produce incontinence by reflex action. The fourth and fifth causes are but little suspected, whereas a tight foreskin is a well-known cause and should always be removed. As to the fourth cause people generally suppose that so long as there is a hole it suffices for micturition. This is erroneous. If the external orifice is too small irritation is set up, which disturbs the vesical centers. In such cases the meatus should be incised. As to the fifth cause,

if a stone only just enters the meatus internus it will be firmly embraced by the sphincter, and no urine can escape. If, however, the stone advance half an inch further incontinence results, for the calculus acts as a gag and prevents the sphincter from closing, and the urine will dribble away. Patients have had calculi impacted in the urethra for years without being aware of it. Where a surgical cause can not be made out, Mr. Teevan has found belladonna most useful where the complaint was nocturnal, as also Sir D. Corrigan's plan of sealing the meatus externus with collodion at bedtime. Strychnia, blistering and exclusively milk diet must not be lost sight of where the incontinence is diurnal as well as nocturnal. Retention of urine in children is usually due to one of three causes: First, congenital contraction of the meatus externus; second, phymosis; third, stone. The two first are at once determined on inspection and the relief given by an operation is of course immediate and permanent. If no phymosis or contracted orifice be discovered, the retention must be due to a stone. Extreme gentleness is required in sounding a child for stone, as in boys the bladder is an abdominal organ rather than a pelvic one, and peritonitis is easily induced by a prolonged or rough sounding. In all of these instances the cause is physical and remediable, and the cures effected are absolute and permanent.—*Lancet.*

The Treatment of Eczema. By J. B. Bradbury, M. D. —Few diseases reward the physician's careful study more than eczema. It assumes so many forms requiring different treatment, that persons of limited experience fail to recognize it and to cure it. Cases of acute eczema speedily recover if the patients have simple diet and soothing applications to the skin. In acute general eczema alkaline and bran baths, and the local application of the linimentum calcis or lead lotion, are valuable. When the disease has somewhat subsided, the administration of arsenic and the local use of zinc ointment hastens the cure. If there is a gouty diathesis, colchicum and magnesia should be given. Indeed, in eczema, the importance of looking for some diathesis can

not be overestimated, as it will resist cure till such constitutional vice has been discovered and corrected. In chronic eczema of the hands arsenic almost invariably does good, with the local use of the diluted ointment of nitrate of mercury. For eczema of the axilla, generally accompanied by boils, the administration of the perchloride of mercury and the local use of mercurial ointment, is almost a specific. In eczema of anæmic young women with constipation, the sulphate of iron and sulphate of magnesia are most valuable. In anæmic young men the tincture of the chloride of iron, in half-drachm doses, answers better than the sulphate. In chronic eczema of the face, an ointment of equal parts of white precipitate ointment and zinc, or subacetate of lead ointment is very useful. Where the hairy parts are affected, the diluted ointment of the nitrate of mercury succeeds better. In eczema of the lips, an ointment originally recommended by Dr. Durkee, composed of almond oil, yellow beeswax, new honey and oxide of zinc, is of benefit. Preparations of tar are of great use in some cases of chronic local eczema. Patients subject to chronic eczema should, as a rule, avoid salt meat, soups, sweets, acids, fruits, pastry and raw vegetables. Eczema in young children is frequently very troublesome, probably owing to the disturbing influence of dentition. Where the disease is syphilitic, gray powder night and morning, with the application of mercurial ointment, is the proper treatment. When the disease has somewhat subsided use the syrup of the iodide of iron. In non-syphilitic eczema, after correcting any error in diet and regulating the secretions, Dr. Bradbury prescribes the ferro-arsenical mixture of Erasmus Wilson and applies the zinc ointment locally.—*Lancet.*

The Treatment of Unhealthy Local and Syphilitic Sores by Immersion. By Arthur Cooper.—The method of treating ulcers by immersion in warm water is not new, having been used by Hebra in syphilitic and other diseases of the skin, while Mr. Hutchinson, in England, has repeatedly called attention to its merits. Mr. Coulson, Drs. Tay-

lor and Simmons have likewise written in favor of the plan and Weisflog "faradizes" the bath in the following manner: One of the electrodes is connected with the bottom of the bath, and as soon as the wound is submerged in the warm water the patient touches the other electrode (which is covered with sponge) with one finger, gradually bringing the other fingers into contact with the sponge according to the sensations experienced in the ulcer. Pain is said to cease almost immediately. Irrigation may be combined with immersion or used alone. Mr. Cooper applies the treatment after the following manner: The patient sits in an ordinary hip-bath containing sufficient water to submerge the affected part, for eight or ten hours a day. If the disease be in the groin, a full-sized bath in which the patient can recline, may be necessary. The water is kept as near as possible to 98° F., by the addition and removal of small quantities of water at a time, taking care not to disturb the patient. The exposed parts of the body are covered with blankets. In the evening finely powdered iodoform or other dressing is applied and the patient goes to bed as usual. Next morning the dressing is allowed to separate in the bath. The bath is repeated day after day as long as may be necessary, general treatment, according to the nature of the sore, going on as usual. A good purge is beneficial at the outset, followed by quinine, iron, etc., and by appropriate specific remedies when the patient is syphilitic. A liberal diet, with plenty of milk and little or no alcohol, answers best as a rule. The bath may be continued until the surface is healthy, and may often be beneficially used until the sore has quite healed. Immersion nearly always quickly relieves, and often entirely removes, the severe pain attending phagedæna. The ulcer is kept clean and free from discharge, caustics are seldom required, painful changes in the dressing are avoided, the edges of wounds made by the surgeon rarely become inoculated and, finally, the plan can be carried out in private as well as in hospital practice, and it is as applicable to women as to men.—*Lancet.*

THE TREATMENT OF SEBORRHŒA. By JOHN V. SHOEMAKER, A. M., M. D.—The treatment in seborrhœa oleosa consists in the use of both general and local remedies. The patient should have plenty of exercise, fresh air and nourishing food. Iron should be given if there is anæmia, and the liberal use of bitter tonics, the mineral acids and pepsin, are often demanded in this affection. As the disease is usually stubborn and only yields after patient attention to the parts, the local treatment is of the utmost importance. The patches should be washed frequently with a mild soap and dusted over with some dry powder, as starch, bismuth, sublimed sulphur or precipitated chalk. The cold bath is of service by contracting the enlarged glands, and the application of a stimulating lotion of zinc or lead is useful in many cases. Dr. Shoemaker prefers generally a mild, stimulating soap, which he calls the "sapo matricariæ sulphurisque," composed of one and a half ounces each of oil of theobroma and olive oil, two drachms of powdered German chamomile flowers, one drachm of precipitated sulphur and one ounce of a weak solution of caustic soda. All the patches should be well washed with it every other evening before retiring. Seborrhœa sicca might be mistaken for eczema or lupus erythematosus. Should a crust or scale be removed in seborrhœa, it will be found to be prolonged down in the follicle, the skin beneath being pale or slightly reddened, while in lupus the part is reddened, swollen and infiltrated; besides seborrhœa is a functional disorder and is never followed by scars. The constitutional treatment is similar to that of seborrhœa oleosa. For the local treatment the crusts and scales must be removed by oil dressings. The patches should be soaked with olive oil until the masses become soft and can be easily removed. If the crusts about the head still adhere, a piece of flannel soaked in oil and covered with oil-silk should be tied on and suffered to remain for ten or twelve hours. The crusts and scales having been macerated and removed, the parts should be well washed with tepid water and the sapo matricariæ sulphurisque, and then wiped dry. This treatment causes the enlarged glands to contract,

the skin to become healthy and the disease to disappear. The following is an elegant preparation for softening the hair and scalp after the use of the soap; Beef-marrow, two ounces; white wax, half an ounce; tannate of quinia, one drachm; balsam of Peru, three drachms; oil of rose, five drops; oil of verbena, three drops; essence of ambergris, half a drachm. Mix and use daily as a pomade.—*Philadelphia Medical Times.*

Cholera Infantum. By A. A. Smith, M. D.—Cholera infantum is a formidable disease of children, and is justly the dread of physicians. Dr. Smith considers it to be a disorder of the nervous system, and that the disturbances of the alimentary canal are only local manifestations of a constitutional disease. It occurs from great heat, especially when there are in addition certain atmospheric influences which depress the nervous system greatly. "Dog-days" are fruitful of cases of cholera infantum. Great heat, bad ventilation, improper food and poor hygiene in all its forms favor the development of the disease. Dr. Smith recognizes two varieties of cholera infantum, the congestive and exhaustive. In the congestive form there is redness of the surface of the body, especially about the head and face, redness of the conjunctivæ, great elevation of temperature, the pulse rapid and full, the nervous symptoms marked, twitching of the muscles and frequent convulsions; the vomiting and purging violent, the matters vomited and passed being very thin and of enormous quantity. All of these symptoms come on rapidly. The two indications for treatment are to reduce the temperature and control the nervous manifestations. Apply cold externally, and give hypodermic injections of quinine and opium. Give to a child of six months one grain of quinine, and the two-hundredth part of a grain of morphine. Usually the stomach is so irritable that medicines and food are vomited. After the temperature is reduced and the nervous system rested, small portions of food may be given. Small pieces of ice allay the thirst. In the exhaustive form of the disease there is paleness of the surface and little or no

elevation of temperature, which may be even below the normal; the pulse is rapid and feeble; the nervous symptoms, although present, are not so well marked as in the other variety; the vomiting and purging are violent, the child sometimes getting rid of more fluid in a few hours than it has taken in days, and the emaciation is rapid and great. The indications for treatment are to check this enormous loss of fluid, and to support the patient. The main reliance must be on opium, alkalies and stimulants. When the stomach will retain nothing, give the two-hundredth part of a grain of morphine hypodermically as in the other case, but omit the quinine. Brandy is the best stimulant. Give five drops in a teaspoonful of water every hour to a child of six months, if there is much exhaustion. An enema of hot water sometimes revives a child wonderfully when on the point of going into collapse. Beef-tea should not be used in the diarrhœa of children, as it almost invariably acts as an irritant and aggravates the disease.—*Medical Record.*

Fatty Change (and Failure) of the Muscular Wall of the Gut as a Direct and Indirect Cause of Intestinal Obstruction and Death. By Farneaux Jordan, F. R. C. S. —Mr. Jordan has noticed, for several years past, cases in which, with perhaps no premonitory symptoms, continuous vomiting, and tympany, lasting one, two, or more days, have been followed by death. These cases, as a rule, happened in fat persons with large abdomens and with signs of degeneration in various organs. The autopsy showed great internal accumulations of fat, but no obvious or recognized cause of intestinal obstruction. In all the cases the intestinal canal was loaded with fat and presented a yellow appearance, and, indeed, in some cases seemed to be simply a tube of fat. The microscope showed that the unstriped muscular fibres of the bowel were converted into fat. From his observations of these cases Mr. Jordan concludes: (1) The smooth muscular fibres of the bowel are subject to fatty degeneration, which may become more or less complete, and that, consequently, they may and do in given cases wholly cease to con-

tract. (2) This fatty change of the essential element of the gut wall, when it ends in complete cessation of contractility, causes death by intestinal obstruction. Fatty failure of of the intestines being in some cases extensive in area and reaching high up toward the stomach, the ensuing obstruction is acute, the vomiting incessant and death early. In other cases there may be more complete or more limited or irregularly distributed fatty change, and there will follow a slower or more fitful stream of symptoms and a later death. (3) Fatty transformation in the gut is more likely to appear in fat, especially very fat, persons; in those who, from habits or natural tendency, are liable to have fatty degeneration of other organs, especially of the heart. Death in heart cases is quick and direct; in intestinal cases slower and more indirect, but, nevertheless, very certain. (4) A premonitory syncope or exhaustion may happen from time to time before death from heart-fattiness, so "attacks" of obstruction may run before the final obstruction from intestinal fattiness. (5) Failure of the bowel is helped on by continued flatulent distension, however it arises, the altered muscular fibres being so injured by overstretching that they never regain their functional contractility. Herein may be traced a likeness to atony of the bladder, where it is well known long-continued distension is, in certain cases, followed by entire loss of contractility; and it is not unlikely that fatty conversion of the muscular wall of the bladder is the basis of certain obscure cases of retention and cystitis coming on after middle age. (6) In a limited number of cases death is due directly to failure of intestinal action, and may come on without obvious exciting cause. The muscular fibre is now no longer muscular. In a larger number of cases death comes more directly from some immediate shock to the abdominal organs. In strangulated hernia, when fatty bowel is present, the blown-out tube never again contracts. The vomiting continues or returns, and death follows, notwithstanding the reduction has been easy and complete, and there is no inflammation or gangrene or other cause of death. All injuries or operations in persons with failing gut are liable to be followed by vomiting, which ceases only with death.—*British Medical Journal.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I. *Resection of Wrist-Joint; Subject Aged Fifty-nine. Recovery.* By EDWARD VON DONHOFF, A. M., M. D. Reported by W. H. MAYFIELD, M. D., Louisville, Ky.

Christopher C., aged 59 years, widower; born in Germany; occupation, laborer.

Previous History.—Before coming to this country the patient had labored as a vintner in the southern Rhine countries, and was always regarded as a man of extraordinary hardiness by his co-laborers. After immigrating to this country he engaged in labor at a foundry in this city, where he continued at work during a period of twenty-two years, maintaining meanwhile a condition of excellent health up to a period beginning three years to the origin of his present condition.

Present Condition.—On May 22, 1879, the patient applied to Dr. E. von Donhoff for treatment. The right hand was found in the following condition: Immobility of the hand generally and wrist particularly; the entire hand much swollen and exceedingly sensitive. On the palmar and dorsal surfaces numerous fistulous openings were observed, from which issued, upon pressure, small quantities of dirty, stinking pus. Examination with the probe (against which patient protested vehemently on account of pain) revealed a denuded condition of all the bones, which could be felt through the various fistulous openings, of which there were ten in number. The hand altogether presented an exceedingly doubtful appearance, appearing to be merely a boggy sac of pus containing dead bones. The general condition of the patient, physically, did not seem to warrant a thought of resection, but his grit was of a character which promised well.

Diagnosis.—Chronic osteo-myelitis.

Treatment.—It was proposed to make an effort to resect the joint, and, failing in this, to amputate above the wrist.

On May 22, the patient being fully anæsthetized, an incision beginning three-quarters of an inch above the approxi-

mal extremity of the metacarpal bone of the little finger, and extending directly downward an inch below the styloid process of the ulna, was made. Another incision beginning at a point opposite the first incision on the radial side, and extending downward below the styloid process of the radius, was also made, no arteries of importance being divided by these incisions. The soft parts were now carefully elevated anteriorly and posteriorly, and the hook of the unciform bone was severed with bone forceps; and with the same instrument the carpi were severed from the metacarpi—all of the carpi being removed except a portion of the unciform. In addition to this the articulating surface of all the metacarpi were removed, and the end of the radius sawed off, the end of the ulna not being removed. No arteries of importance were cut and none were tied.

Progress.—The hand was placed on a padded splint, the palm being supported by a soft pad of cotton-wool and confined by a roller, and the whole covered with oiled silk. The patient was placed in bed and ordered to be kept quiet. Temperature at 8 P. M.—ten hours after the operation—90½°, pulse 80. The patient suffering considerable pain, a hypodermic injection of one-quarter of a grain of morphia was given. In addition to this fifteen grains, each, of hydrate of chloral and bromide of potash were given at bedtime, after which the patient slept well until the following morning.

On the 23d at 11 A. M., temperature 98½°, pulse 80. The wound dressed with lint and carbolized water, the splint reapplied, care being taken to support the palm with a pad of cotton wool. 9 P. M., temperature 100½°, pulse 102; complaining of much pain; a hypodermic injection of one-quarter of a grain of morphia was given, also the potash and chloral were repeated, the patient sleeping soundly until 4 o'clock the next morning.

24th. At 11 A. M., temperature 99½°, pulse 100; dressing reapplied and quinine, grs. x in solution, were ordered to be taken every three hours. Having had no operation from the bowels for three days, castor oil ½ oz. and turpentine

gtts. x, were ordered to be taken immediately. 9 P. M.; temperature 102°, pulse 105. Morphia, one-quarter grain, was again given hypodermically to produce sleep.

25th. 10 A. M.; temperature 98½°, pulse 85. The oil and turpentine had acted twice during the night; wound redressed and quinine continued. 9 P. M.; temperature 99°, pulse 80.

26th. 11 A. M.; temperature 98½°, pulse 75. 9 P. M.; temperature 99½°, pulse 85. On the following day (27th) quinine was discontinued and citrate of iron and quinine were ordered.

Nothing of importance transpired from this time forward worthy of note, the wound being dressed daily with lint and carbolized water, the patient resting well and eating abundantly, and his temperature remaining about normal. Eight days after the operation the wound was carefully examined, and found to be highly studded with healthy granulation tissue, the ends of the bones being thoroughly covered, the suppuration quite free but not extraordinarily offensive. From this time forward to the present the wound continued to heal rapidly, the cicatrization at this writing (July 26) being well-nigh completed. The patient is able to flex and extend the hand, though imperfectly; is also able to slightly flex the thumb and fingers. The hand is yet somewhat swollen owing to the, as yet, imperfectly established return circulation.

Remarks.—As was stated in the early history of the case, the patient was quite aged, being fifty-nine at the time of the operation, and his bodily condition not being such as would warrant an operation of such magnitude ordinarily.

The statistical records of operations for resections of the wrist-joint, as reported by H. Culbertson, M. D., to the American Medical Association in 1876, would seem to indicate that operations on patients similarly aged to the one herein named are very unfavorable in their results. In a list of cases, comprising 112 in number, in which the operations were done for disease of the joint, but two cases resulted successfully in aged patients. The patients representing the

successful cases statistically reported were aged 55 and 59, respectively; the first case being operated upon by Just, in Leipzig, Germany, the operator removing simply the end of the radius; the second case, aged 59, being operated on by Heyfelder, of Germany, for caries of the joint, the end of the ulna cuneiform and pisiform bones being removed. Both cases resulted successfully; the second patient' at the end of five years, having quite free use of the hand. In the present instance the quantity of bone removed, and the extent of the wound necessarily made, rendered the chances of the patient much less favorable than were those of the cases cited above, in which the resections were incomplete and the trauma necessarily small.

The case just reported is one which points a lesson not to be overlooked in conservative surgery, and it is to be hoped will be remembered with a view to imitation by operators to whose lot similar cases may fall..

ART. II. *An Unique Case of Punctured Fracture of the Base of the Skull, with Autopsy.* By CORNELIUS WILLIAMS, M. D.

On Tuesday, Nov. 19, 1878, S. A., a butcher, about 48 years of age, came into my service in the Out-Door Department of the Mt. Sinai Hospital, with the following history:

On the Saturday previous, Nov. 16, while hanging meat in Washington Market, he slipped and fell against the beam to which the iron hooks are affixed. There was a lacerated wound of the right cheek on a level with the angle of the mouth, and about two and a half inches from it. There was considerable contusion about the temple and the eyelids; the eye was bloodshot, and there was considerable chemosis.

It was on account of the eye that he applied for treatment. He stated that immediately after the accident he had walked to the Chambers Street Hospital, where his injuries had been attended to. The wound in the cheek was apparently not a deep one, and had not penetrated into the mouth. It had been closed with sutures, but was now filled with pus. I removed the sutures and examined the wound without discov-

ering that it was more than superficial. I found some periostitis of the orbit and adjoining bone.

An ophthalmoscopic examination of the interior of the eye under atropine mydriasis revealed an entirely normal fundus, and the patient's vision was, as in the other eye, normal. Supposing that no serious injury had been inflicted, I ordered ice applications to the right side of the head, and directed the patient to return on Thursday. He came, and it was at once plain that the character of his injury had not been appreciated, for then cerebral symptoms were well declared. I advised him to apply at once for admission to the hospital. This, however, his wife declined, and begged me to attend him at his house. When I saw him an hour later, I found that he had a temperature in the axilla of 102° F. He was somewhat stupid, though answered intelligently, complained of pain in the head, and was constipated. I found, upon careful examination of the wound of the face, that a probe could be made to pass inward and upward to the extent of three inches, without then seeming to reach the end of the canal. Exophthalmos, which had not been noted on Tuesday, was now marked. An ice-bladder was ordered to that side of the head, and a croton oil purge given.

Punctured fracture at the base of the skull was diagnosticated; an unfavorable prognosis was given to the family, and a consultation was suggested to them. On the morning of the 20th all the symptoms were aggravated; temperature, 104° F.; patient more stupid, but when aroused answered properly; complained of great pain in right side of head; very little discharge from the wound in the face. The bowels had moved freely. The ice-bladder was continued, and at 12 o'clock Dr. L. Weber saw the patient in consultation. In the single previous exploration of the tract of the wound, which I had made in the presence of Dr. Mundé, the probe had passed upward, backward and inward, following the direction of a line drawn from the external wound to the inner side of the root of the nose. In the examination now made in conjunction with Dr. Weber, and first demonstrated by him, it was rendered apparent that the hook had passed fur-

ther outward than I had supposed, and had penetrated the roof of the orbit toward its outer side, instead of through the ethmoid in the region of the sella turcica. The consultant advised against any operation at the time, on account of the condition of the patient. The patient's temperature was 105° F., and his general condition was about as on the previous evening. There was no paralysis except of the vesical sphincter.

It was now observed that, though he ate such food as was given him, and drank with avidity, as he did up to within 15 minutes of his death, he either could not, or would not, utter any word, and remained in possession of the full use of all his limbs, yet speechless, until 10 o'clock on Sunday morning, when he died. The patient's condition at my visit in the evening had remained the same, except that his temperature had gone up to 106° F., and between 9 and 11 o'clock on the night of the 20th he had a number of severe convulsions.

At about 12:30 on the morning of the 21st, with the assistance of Dr. Weber, Dr. Mundé, Dr. Saunders and Dr. Holmes, the patient being etherized, I made an incision along the superior border of the right orbital fossa, extending from the nasal prominence of the frontal to about three-quarters of an inch beyond its external angular process, and down to the bone. I then dissected the orbital tissues away, keeping close to the bone, and dislocating the eyeball downward and inward. Continuing the dissection backward, I came upon the site of the fracture, about one and three-quarter inches from the upper orbital margin, and a little to the outer side. On reaching the place of the fracture, about a teaspoonful of very fetid, red-colored pus escaped, together with a quantity of gas. The patient's breathing, which had been for some time labored and rapid, immediately sank to the normal, accompanied by a deep sigh. I desired to further enlarge the incisions, and remove any spiculæ of bone, which I was confident would be found pressing on the brain, but it was advised to do nothing further, but dress the wound and put in a drainage-tube, which was accordingly done. The outer in-

cision was closed with sutures to its external angle, where the tube was brought out, and the man put to bed. An hour after the operation his temperature, which had been 106° F. immediately before, had fallen to 103½° F. The relief was, however, only temporary, and he had convulsions again before morning. When I saw him about 11 A. M., I re-opened the wound, and evacuated a considerable quantity of pus, the drain-tube having become clogged. I then inserted a horse-hair drain, and ordered ice to the part, together with supportive measures.

The patient died at 9 o'clock A. M., on November 24. At 5 P. M. of the same day, assisted by Drs. Holmes and Saunders, I made an examination of the interior of the skull. We found the hook had entered the cheek as indicated, had coursed upward and inward, passing behind the zygomatic process of the malar, through the spheno-maxillary fissure, fracturing the bones on either side, and through the roof of the orbit, about one and a half inches back and a little to the outer side, producing there a comminuted punctured fracture, lacerating the dura mater, and forcing several plates of the thin bone into the substance of the brain. An abscess had formed in the brain, having the form of a cone; its apex upward, and about one and a half inches deep by one inch at its base. Immediately around the abscess cavity there was a zone of intense cerebritis; there was intense congestion of the entire brain, and very plentiful deposits of pus in the meshes of the pia mater over its superior portion. The cavities of the arachnoid and the ventricles had not an unusual quantity of fluid in them.

The mortality in ordinary punctured fracture of the skull, where trephining is resorted to early, is always very large; yet an operation which shall have for its end a removal of any and all substances which are acting as a foreign body, must certainly always remain an imperative and unvarying rule of surgery. Had I appreciated the gravity or exact nature of the injury which the man had sustained when I first saw him, it would then possibly have not been too late to have resorted to a radical operation for his relief. An exam-

ination of his face wound was, however, as superficial and barren of real information as to his true condition as had evidently been the case with the surgeon who first saw him and closed the wound with sutures. The condition of the eye and adjadent parts was, when taken by itself, misleading. I have very often seen a similar picture presented as the result of slight injury, or from an ordinary periorbitis without assignable cause, chemosis of the ocular and palpebral conjunctiva being constantly present, even with very slight periostitis, such as may accompany an hordeolum at the outer canthus. The ecchymosis in this case was not greater than would have been accounted for by the blow received by falling upon the temple, which involved the outer angle of the orbit, and though most marked in the upper lid, was not confined to it.

Lastly, the interior of the eye, examined after complete mydriasis, showed no lesion whatever, proving—though the globe must have suffered considerable compression, which, as the subsequent history developed, was kept up several minutes, the man remaining suspended upon the hook until lifted down—that such compression may leave no trace. The probe, as first introduced by me, evidently left the track made by the hook and wandered into to the adjacent cellular tissue.

It may be that the "center for language" is not invariably in the left anterior lobe, but may sometimes develop in the corresponding part of the brain upon the right side. This man, though not suffering from paralysis of any of the muscles used in phonation, was manifestly unable to form words, though sounds he freely uttered which much resembled those used by the deaf and dumb. Perhaps his memory for words had been annihilated. If the hypothesis of a transposition of the center for language to the right side be not too radical or violent, then the abscess and zone of cerebritis in the anterior lobe, and involving the island of Reil, would well account for the abolition of that faculty. The subject was right-handed.—*Med. Record.*

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

ART. I. *Upon the Treatment of Varicose Ulcers of the Leg with the Solid Rubber Bandage.** By I. E. ATKINSON, M. D., Baltimore, Md.

My apology for narrating before this faculty the two following cases is the desire I have to call the attention of the members more particularly to the value of the solid elastic bandage in the treatment of various affections of the lower extremities. It is true that some time has elapsed since Dr. H. A. Martin, of Boston, first made known the method of treatment referred to (and which had been employed by him many years), at the meeting of the American Medical Association in 1877, and published an account of it in the "Transactions" of that body for that year. But it is, nevertheless, just as true that the practice has by no means received the attention it deserves, at least in this community; and that current medical literature has afforded but a meager number of pages to its consideration. The article referred to is entitled "Surgical Uses, other that Hæmostatic, of the Strong Elastic Bandage." In it the author speaks in glowing terms of the extraordinary results obtained by him in the treatment of ulcers of the leg, of certain morbid conditions of the joints, of various cutaneous diseases, of varicose veins, and other affections. He claims to have treated between six and seven hundred cases of non-specific ulcers of the legs with unvarying and complete success. Results like these, secured in a class of cases usually considered among the most unpromising to medical art, are so encouraging that one feels impelled to hope that their treatment will in the future afford as much gratification to both patient and physician as they have occasioned suffering and disappointment in the past.

As it is only of ulcers of the lower extremities that I desire to speak at the present time, I will confine my attention to that portion of Dr. Martin's paper which treats of these lesions,

*Read at the Eighty-first Annual Session of the Medical and Chirurgical Faculty of the State of Maryland—Baltimore, April, 1879.

referring those who desire further information concerning the more extended application of the bandage to the article itself. The solid elastic bandage, then, is of pure rubber, and when used in the treatment of ulcers of the leg should be, in length, ten and a half feet, and in breadth three inches. Its thickness should equal that of No. 21 of "Stub's wire gauze" (Dr. Martin has found that this thickness is exactly the proper one, and consequently lays great stress upon the necessity of preserving this dimension). Two or three inches of strong linen cloth should be attached to one end of the bandage and to this strong double tapes eighteen inches long should be sewn. The bandage may be longer or shorter or narrower, but the thickness should under all circumstances be as already mentioned.

The directions for the application of the bandage are simple but explicit. The leg should be wiped carefully, so as to remove all grease, which has a tendency to destroy the elasticity of the rubber, and the bandage applied directly to the leg. If the skin be irritated or chafed, a piece of soft linen cloth may be placed over the tender parts, but this procedure will rarely be found necessary. The bandage should be applied the first thing in the morning before getting out of bed, in order to prevent the distension of the leg by the impeded column of blood, fostered by the erect position. In applying it, it should not be at all stretched, but should be carried around the leg "with just snugness enough not to fall down." As soon as the foot is pressed upon the ground, the bandage is put upon a gentle tension, just sufficient to retain it in position all day and to give that support to the blood column that the relaxed vessels fail to afford. The bandage thus applied is worn all day, removed at night, washed in warm or cold water and hung up to dry, the ulcer in the mean time being dressed with a simple application to protect it from irritating external influences. Before arising in the morning, the leg is again wiped dry and clean and the bandage readjusted. Upon removing the bandage at night the leg will be found bathed in moisture. During the first few days of this treatment

there frequently occurs a slight pustular eruption upon the leg; this, however, need offer no obstacle to the continued use of the bandage, since it invariably subsides without special treatment and is but little disposed to recur, the skin soon acquiring the most perfect toleration. The itching that frequently occurs at night in the unprotected surface may be combatted, if intense, with ordinary anti-pruritic remedies.

I have thus tried to give an epitome of Dr. Martin's practice in these cases, but must refer those who desire more intimate knowledge to his excellent paper already referred to. It has received full endorsement, so far as concerns its value in the treatment of certain eczematous affections of the lower extremities, at the hands of Dr. L. D. Bulkley, of New York (*Archives of Dermatology*), and in the *London Lancet*. Mr. George W. Callender gives his favorable opinion of its results in the treatment of varicose veins and ulcers. My own experience, though limited, has likewise led me to think most favorably of it in cases of the nature of those above mentioned. I have selected the two following cases from a number successfully treated as examples of the most inveterate forms of varicose ulceration:

Case I.—Mrs. Lena G., a large, florid German woman, was sent to me by my friend Dr. Samuel Johnston, January 23, 1879. She is 43 years old; works when she can upon a sewing machine. Her youngest child is eight years old. She still menstruates regularly. Eighteen years ago, while pregnant, a vein in her left leg burst and there followed at the point of rupture an ulcer, which healed after a time. The cicatrix remains and is of the size of a quarter of a dollar. She has suffered more or less discomfort from varicose veins ever since, but has always been able to attend to her duties until about four years ago, when a blow upon her left leg gave rise to an ulcer, which steadily grew worse despite many forms of treatment patiently followed, both in hospital and at her home. Upon presentation at the Special Dispensary, the ulcer was found to be situated upon the left leg, below the middle and upon its inner aspect, running obliquely upward and backward. It was 10.5 cm. long by 5.5 cm. wide, and

was irregularly oval. The edges were elevated and hardened, the walls rapidly sloping to a smooth floor of a greasy yellowish semi-membranous appearance, and from which a scanty seropurulent discharge oozed. There was induration of the base and deep infiltration and redness of the surrounding skin. She complained much of pain and inability to sleep in consequence, and that locomotion was very much impeded. The solid rubber bandage was applied in accordance with the rules already mentioned, and she was directed to return in two days. On the 25th improvement could already be observed, and the patient was rejoiced to find that she was quite free from pain during the day and was able to sleep at night.—By February 13 the ulcer was in every way better. Healthy granulations were every where present. The edges were becoming quite level with the floor, and the bluish line of healthy cicatrization was continuous. The ulcer was decidedly smaller, and the patient declared that since its existence she had never felt so well.—April 5: The ulcer is almost healed; there remains only a very superficial ulceration hardly larger than a dime. A few days will complete cicatrization.—May 1: Well.

Case II.—M. W., German widow, 42 years old, tall and swarthy; came to the dispensary in company with the woman whose case has just been narrated. Her general health appeared to be good. She ceased menstruating at 31 years, when last pregnant. Fourteen years ago, when in the family way, a varicose vein in her right leg was ruptured, and ever since then she has been troubled with ulcers. She has undergone numerous courses of treatment, but has never been any better. "Six years ago," she says, "her physicians recommended amputation." She suffered greatly, both night and day, from incessant pain, and could only hobble about with great difficulty. The original ulcer was just below the calf of the right leg; but at present, January 25, numerous ulcers are seated upon a bed of scar-tissue reaching down as far as the malleoli and encircling the leg. This cicatricial tissue extends from the ankle-joint upward, anteriorly 22 cm., and posteriorly 17cm. The leg is very much hypertrophied, as can be seen from the following comparative measurements:

Circumference of left leg at calf, 36cm.; of right leg at calf, 43cm.; of left leg at middle, 31cm.; of right leg at middle, 40cm.; of left leg at ankle, 26.5cm.; of right leg at ankle, 33cm. The hypertrophy is partly due to œdema, principally to connective tissue overgrowth, and strongly suggests the appearance of a slight degree of elephantiasis arabum. The scar-tissue is of a bright pink color, and gives a sensation of resistance and of deep infiltration to the finger. Sprinkled over this tissue, irregularly, but principally posteriorly, are a great number of ulcers, usually of small size and irregular outline. Their edges are not prominent or overhanging; their surfaces are concave, and covered with a thin yellowish deposit quite concealing granulations. The largest ulcer is just above the inner malleolus, and is half-moon shaped. From these ulcerations is discharged a copious amount of serous-looking fluid, which bathes the leg and emits a faint, sickening odor. There is a small ulcer upon the left leg, just above the ankle.

There is no reason, either from the personal or clinical history, to suspect syphilis as the cause of her condition. The elastic bandage was applied, and she was directed to continue at night a carbolized wash that she had been using. Improvement began immediately, and by February 13 most of the ulcers had healed or were almost closed. Those remaining were still painful and discharged a serous fluid. The improvement in the condition of the patient was marked, and she could now walk anywhere, and could sleep at night. The circumference of the leg at the calf was, as before, 43cm.; at the middle it was reduced to 38cm., and at the ankle to 32cm. By March 25 the ulcers had nearly all healed. There remained only a few scattered ones, of pin-head size mostly, and the large one upon the anterior inner aspect of the leg. This one was flat, nearly level with the skin, and coated with a thin, yellow deposit. It was nevertheless much shallower than formerly, and certainly smaller; granulations were visible around its edges. She was very proud of her activity, and said she could "run like a girl." The dimensions of her leg, April 1, were for the circumfer-

ence of the calf 41cm., for that of the middle portion 37cm., and at the ankle-joint 31cm. The indications are that she will almost certainly, in a very short time, be free from ulceration, and that much may be expected in the way of reduction of the hypertrophy. Her internal medication has consisted of small doses of the tincture of the chloride of iron.

It can not, of course, be expected that cures effected in such cases as the foregoing will be permanent, should the use of the bandage be discontinued. The legs if left to themselves will almost certainly break down with new ulcerations. But there is every reason to expect (and we have Dr. Martin's personal experience to strengthen the expectation) that that patient need never again endure the untold sufferings of his earlier experience, who will be fortunate enough to possess, and wise enough to make use of, the solid rubber bandage, either for the cure of his affliction or for its prevention when its return is threatened.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

WHITE SULPHUR SPRINGS, W. VA.

"Whether at Naishapur or Babylon,
Whether the cup with sweet or bitter run,
The wine of life keeps oozing drop by drop,
The leaves of life keep falling one by one."

In these few lines are compressed the philosophy and the rule of "the regular correspondent" whether he or she be in the mood to write or not, the press brooks no delay, and the promised sheets must be transmitted. Whether the cup with sweet or bitter run, the leaves of the correspondent must fall one by one.

KATE'S MOUNTAIN.

I promised to say something in regard to the interesting "Kate's Mountain," which, with its beautiful verdant slopes, towers far aloft, and looks ever down upon the kaleidoscopic scenes annually enacted in this peaceful and beautiful valley. This mountain, on the southern boundary of the valley, was in the early days of this country the scene of a romantic in-

cident, which has given it its name and its history. It is said that a brave settler living near this mountain received intelligence that the savages were approaching his home. The nearest colonial fort, or block-house, was at Covington. He proposed to his wife that he would carry the children there, and returning, carry her also to the place of safety. The Indians in his absence made their appearance at the house, when the brave wife fled for refuge to the adjoining mountain, which ever since has borne her name. From this mountain she made her way to the fort at Covington, and during the attack of the savages on this point continued to mold bullets for the gallant defenders, and, though her husband perished during the attack, this intrepid heroine continued her work, and it was to her that the defenders of the fort were indebted for the continued supply of ammunition, which enabled them to make their defense efficient and complete. This brave mountaineer and his wife were the grand-parents of Mr. James Calwell, who is the real founder and developer of the White Sulphur Springs. The Springs under his management became famous, and the successful treatment of a few cases soon gave these waters a reputation, which they have since so triumphantly sustained. One of the immediate descendants of Mr. James Calwell now resides here, and, though the property has passed into the hands of a company, he takes an unfaltering interest in its development and prosperity.

THE SALE.

Writing of the present owners reminds me that they are still anxious to dispose of this property. The debt accumulated is enormous, amounting, it is said, to over a million of dollars. Repeated efforts have been annually made to dispose of the property, but without success. No one is willing to pay even one-half of the amount representing the debt, and even if under the best circumstances one million of dollars were received for the property, the loss to the company would be absolute. Under such discouraging circumstances there seems to be but one method to be adopted—that is, to offer the property annually for sale, and to lease it by the year. The present lessees, Messrs. George L. Peyton & Co., hold

the place, as will be seen, under very discouraging and very disadvantageous circumstances. They have no security as to their being allowed to hold the property for a succeeding year, and no security that any money expended here for furniture, improvements, or decoration will ever be returned to them. No landlords could hold property under worse circumstances; and yet it must be conceded that these gentlemen are not only liberal, but generous to a degree, in their relations with the public.

It is known to me that during the past summer, when every bed was in demand, boarders paying $3 per day, the proprietors here offered to take all yellow fever refugees at one-half the per diem, losing thus $1.50 each day on every one who accepted these generous terms; and after the season had terminated here and many residing in the yellow fever zone were naturally afraid to return to their homes, the same offer was substantially made to them. But a few hours before commencing this letter Mr. George L. Peyton came to me and stated that one of the boarders, afflicted with a painful disease, had exhausted his resources and must return home, but if I thought the patient was obtaining benefit from the water he should remain here free of charge. Such an offer, it must be conceded, was not only liberal, but generous in the extreme. It was literally illustrating the scriptural invitation, "Come ye to the waters of Life, and drink freely without money and without price." But another incident has come to my knowledge which more fully manifests the liberality of these gentlemen. It appears that a prominent politician of Georgia had telegraphed to the proprietors engaging rooms from a certain date. When the day arrived nothing was heard of this gentleman. Two weeks had elapsed before he made his appearance, finding the rooms faithfully kept for him. In settling his bill he noticed that the proprietors made no charge for the time mentioned, giving him thus the sum of two hundred dollars. It is true, however, that this effort was resisted and the bill in full paid. But this fact does not the less prove the unbounded liberality of the proprietors. It is a great pleasure to state these facts, and more especially as nothing what-

ever is known here as to my intention. All have heard of Virginia hospitality, but when has it been more liberally manifested?

THE CALWELL HOUSE.

The Calwell house is fast filling up, and is becoming deservedly popular. Boarders here can all visit the White Sulphur Springs either by the omnibuses, making almost hourly trips there, or by walking through the beautiful wood which separates the two places. The walk is only ten minutes long, and is usually preferred. The lessees are particularly fortunate in having secured the services of such experts as Mr. M. O. Miller and Major M. Hanley. Under the management of these gentlemen the Calwell House is conducted in the quietest and most complete manner. They ought certainly to be very highly appreciated by the proprietors, as their places could not well be filled.

SUNDAY.

One of the pleasantest features here is the quiet and repose everywhere observed on Sunday. There is one large church adjoining the grounds, at which service is held twice every Sunday. There are usually many prominent clergymen at the Springs, and during the season one of these usually holds service, sometimes in the ball-room and sometimes in the church building. Mr. Clements, of Texas, preached last Sunday, and his sermon is said to have been one of the best ever delivered here. The regular pastor of the church adjoining the grounds, the Rev. Mr. C. M. Brown, is a young man of marked ability and devoted to the service which he has chosen. He gives great promise of filling a very high position in the Methodist Church, and his sermons are highly appreciated and enjoyed.

A DAY AT THE SPRINGS.

There are many persons who will be glad to learn what is the routine of a day at the Springs. The breakfast hour extends from 7:30 to 9:30 o'clock. After this meal the visitors usually collect on the porches or walk about the grounds. Many frequent the billiard room, the ten-pin alley or the shooting gallery, while many spend the forenoon quietly

reading under shady trees on the lawn. There is great absence of ceremony here, and acquaintances are made easily and pleasantly. The dinner hour extends from two to three o'clock, and then there is usually a dispersion of the company for the afternoon. So general is the afternoon nap, that the whole place seems wrapped in slumber from three to five, at which hour the delightful strains of music from the band, stationed in the center of the lawn, call out the visitors refreshed and ready for the amusements of the evening. These consist of music and gay conversation in the parlors, and dancing in the ball-room, with flirtations on the galleries and on the shady walks. Many a young man coming here becomes practically familiar with the names of the many walks, and Courtship's Maze has to him a significance which few of his seniors seem to suspect. A very welcome custom is for the band to serenade the young ladies gathered here. What is particularly worthy of remark is that these serenades are often given, not to acknowledged belles, but to their sisters, who, leading a life of gentle retirement, are not on that account the less admired or appreciated. Many a girl, brilliant in reputation, refined and cultivated, but a stranger to the ball-room and the German, finds herself thus selected for one of these midnight musical tributes; while many who frequent chiefly the ball-room and attract the notice as the reigning belle is surprised to learn in the morning the name of the lady for whom the serenade was intended. The band here is unusually good, and some of the pieces are represented by accomplished musicians. One of the most pleasing surprises during these performances is the distinct echo of the music as it is caught up by the mountains and repeated along the valleys. These effects are startling and delightful.

THE RHODODENDRONS.

The beautiful rhododendron is seen here in great profusion, and its flower, the most beautiful of all, is now in great luxuriance. The tree is a species of laurel, and its leaf closely resembles the laurel leaf; it is more ovate, however, sharper, and not quite so thick. How glisteningly gleam

the verdant, coriaceous plants as the sunshine glints o'er them, while in the mass of glittering green shine forth matchless flowers of unequaled variety! One can readily understand how it is and why it is, that so many go enthusiastically forth to enjoy the sight which these wonderful trees present. The wood from it is almost as beautiful as the flower, and pianomakers are, with vandal-like ruthlessness, destroying this rare tree that they may obtain its wood for the interior decoration of their instruments. One firm in New York purchased $5,000 worth of these trees for this purpose. Alas! that any one should, for the display of rarity in art, destroy the most wonderful creations of nature! America, as well as Europe, is ravaged by its vandals.

THACKERAY.

I heard to-day singular anecdotes in regard to Thackeray. It seems that while dining in Richmond, Va., with a prominent physician there, he was seated near the wife of his host. This lady, in endeavoring to reach a dish near her, dipped an exquisite piece of lace into some gravy. Thackeray exclaimed, "O, Madame, look at your lace! but is it real?" Strange that one who described so delightfully the character of a gentleman, who gave to the world the wonderful creations of Henry Esmond and Colonel Newcome, should have perpetrated so great, so execrable a blunder! On another occasion, meeting a celebrated lady of Charleston, S. C., he said to her: "Madam, I have heard that you were very fast." She replied with indignation: "And I, sir, heard that you were a gentleman." The distinguished novelist left behind him in America many beautiful records of his visit; but alas! these beautiful pages are not infrequently stained with inexcusable blots. These anecdotes were brought out in connection with a discussion in regard to Sir Garnet Wolsey, who, after accepting the hospitality of a refined family in this country, said to one of them: "I like the women of America, but the men are beastly." It really seems that the demeanor of a gentleman has become like a garb, to be carried and changed as he may deem the occasion to demand, and that even the most distinguished shock the refined sense of society by the perpetration of acts which would disgrace a savage.

E. S. GAILLARD.

CHEMISTRY AND PHARMACY.

"Diruit ædificat, mutat."—Hor.

CONDUCTED BY C. W. NULL, M. D., LOUISVILLE, KY.

Petroleum.—When we are told that at the present time over 1,800,000 gallons of petroleum, or earth oil, are brought to the surface every day in the oil regions of Pennsylvania alone, the mind is staggered by the contemplation of the magnitude of this new industry. So lavish is Mother Earth of her hidden stores of oil that it is sent to the surface much faster than it can be taken care of or stored, and at the present time 300,000 gallons, at the lowest estimate, run to waste every day. The great United Pipe Line and other methods of conveyance utterly fail to convey the oil to markets, and the enormous tanks for storage are full to overflowing. There are tanks owned by companies which hold 5,000,000 barrels of oil, and all of them are full. The wooden tanks owned by individuals and private concerns amount, in their aggregate capacity, to as large a number of barrels, and these also are full. Thus it will be understood that there are great lakes of oil above ground as well as below; but there is good reason to believe that the subterranean deposits may, with greater propriety, be called oceans rather than lakes. The oil workers are evidently pumping from inexhaustible supplies in the rock chambers below, and what are called the "spouting wells" deliver their vast currents with the same impetuosity as when the drills first tapped the pent-up stores. An interesting inquiry arises as regards what becomes of the oil that can not be secured; into what does it flow, and where is its final resting place? Any one who has visited the oil regions will know of the nature of the country, and readily understand that much of the oil flows into brooks or small rivers, and in time finds its way into the large rivers, and is ultimately lost in the Gulf of Mexico or the Atlantic Ocean. Still larger quantities are absorbed by the earth in ravines and marshy places, and thus it is lost to view. In the famous district one is led to exclaim, "Oil, oil,

everywhere, and no untainted water to drink." There is oil in the soil; oil in the springs; oil in the bushes and trees; oil in the atmosphere, apparently; oil in the clothing, and in the mouths, eyes and hair of the workmen; the bread and coffee of the region have the odor of oil, and the beds are saturated with it. How wonderful is all this! Well do we remember when the first vial of "rock oil" fell into our hands. It was called "Seneca oil," and it was claimed to be a most efficacious remedy for a variety of ills to which the human body is subject. The statement that it flowed spontaneously from a spring in Pennsylvania was at first received with much incredulity, as that was regarded as impossible; but in a short space of time the truth was known, and the oil was no longer regarded as a mixture devised by human hands. American petroleum oil is now used as a means of artificial illumination in nearly all parts of the world. It goes along with rum, powder and muskets to the savage tribes of Africa, and the mud houses on the banks of the rivers of the interior are illuminated by its combustion; it is found in the interior of the Turkish Empire, in Persia, in Egypt, in Palestine, in China, in Japan, and in the remote islands of the sea. For the paltry sum of fifteen cents we can purchase a gallon of the clear, refined oil, and the cost of the light afforded, in comparison with gas as furnished at the lowest cost in cities, is as one to twenty in its favor. It is just now the most formidable antagonist of gas, and we can scarcely hope in the utilization of electrical force in the future, to secure light at a lower expense.—*Boston Journal of Chemistry.*

To Remove Fusil Oil from Spirits.—According to the *Brennerei Zeitung*, a single agitation of spirit with the following compound will completely remove the fusil oil from potato brandy, and will leave the fluid perfectly clear: Sugar of milk, 1 part; starch powder, 2 parts; powdered albumen, 5 parts. About 4 oz. of the powder are sufficient for a gallon of spirits. Another journal gives the following directions for a similar process: The liquid is sweetened with crushed sugar and strained, and one ounce of pure starch,

half an ounce of finely powdered prepared albumen, and half an ounce of milk sugar are added to every two gallons. The whole is well shaken several times and then allowed to rest for twenty-four hours. It will now be found to be beautifully cleared without infiltration.

Composition of Explosives.—A German chemical journal gives the following analysis of explosives used as substitutes for gunpowder: Diorexine: nitrate of potash, 50 per cent.; nitrate of soda, 25 per cent.; sulphur, 12 per cent.; sawdust from hard wood, 13 per cent. Azotine: Chili saltpetre, 69.05 per cent.; carbon, 15.23 per cent.; sulphur, 11.43 per cent.; petroleum, 4.29 per cent. Petralite: nitrate of potash, 64 per cent.; impregnated wood or charcoal, 30 per cent.; antimonium crudum, 6 per cent. Johnite: saltpetre, 75 per cent.; sulphur, 10 per cent.; lignite, 10 per cent.; picrate of soda, 3 per cent.; chlorate of potash, 2 per cent. Carboazotine: nitrate of potash, 61.04 per cent.; sulphate of iron, 0.73 per cent.; soot, 24.65 per cent.; sulphur, 13.58 per cent.

Cultivation of Fragrant Plants.—The area devoted to the cultivation of plants used in the manufacture of perfumes is far greater than many suppose it to be. Of roses, in Bulgaria there are 5,000 acres; lavender and peppermints at Mitcham, England, 250 acres; violets at Nice and Mentone, 300 acres; orrisroot, Italy, 400 acres; geraniums, Valentia, 250 acres; lemon grass, Ceylon, 600 acres; citronella and patchouly, Singapore, 270 acres; jasmine, acacia and tuberose, Cannes, 400 acres; orange and lemon, Sicily and Bergamo, 150 acres. Other farms exist in Timour and Malaya of which no accurate account can be given.

A New Disinfectant.—Dr. John Day, of Geelong, Australia, recommends for use in civil and military hospitals, and also for the purpose of destroying the poison germs of smallpox, scarlet fever and other infectious diseases, a disinfectant composed of one part of rectified oil of turpentine and seven

parts of benzine, with the addition of five drops of oil of verbena to each ounce. Its purifying and disinfecting properties are due to the power which is possessed by each of its ingredients, of absorbing atmospheric oxygen and converting it into a peroxide of hydrogen—a highly active oxidizing agent, and very similar in its nature to ozone. Articles of clothing, furniture, wall-paper, carpeting, books, newspapers, letters, etc., may be perfectly saturated with it without receiving the slightest injury; and when it has been once freely applied to any rough or porous surface its action will be persistent for an almost indefinite period. This may at any time be readily shown by pouring a few drops of a solution of iodide of potassium over the material which has been disinfected, when the peroxide of hydrogen, which is being continually generated within it, will quickly liberate the iodine from its combination with the potassium, and give rise to dark brown stains.—*British Medical Journal.*

Palatable Castor Oil.—Rub up two drops of oil of cinnamon with an ounce of glycerine, and add an ounce of castor oil. Children will take it as a luxury and ask for more.

Chloride of Lime as an Insecticide.—*Le Cultivateur* remarks that rats, mice and insects will at once desert ground on which a little chloride of lime has been sprinkled. Plants may be protected from insect plagues by brushing their stems with a solution of it. It has often been noticed that a patch of land, which has been treated in this way, remains religiously respected by grubs, while the unprotected beds round about are literally devastated. Fruit trees may be guarded from the attacks of grubs by attaching to their trunks pieces of tow smeared with a mixture of chloride of lime and hog's lard, and ants and grubs already in possession will rapidly vacate their position.

The Fermentation of Grape Juice.—This fermentation is exclusively due (according to M. Pasteur) to the presence of cells of yeast at the surface of the grapes, whither the air

has brought them. If these cells be suppressed, fermentation should be thereby rendered impossible. Now, in the Jura, it is found that the grapes do not bear any traces of these cells until the end of July. Hence, if they are then protected from the dust of the air, it should be possible to bring them to ripeness without the juice being afterward able to ferment. On this supposition M. Pasteur placed grapes in inclosures where all access of atmospheric dust was rigorously prevented. He developed grapes in wadding, raised previously to a temperature of 100° C. He showed in the French Academy grapes ripened under these conditions, and he affirmed that one might crush them and keep them any length of time at the suitable temperature, without the least fermentation taking place.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Index damnatur cum nocens absolvitus."

Diseases of the Intestines and Peritoneum, By JOHN SYER BRISTOWE, M. D., J. R. WARDELL, M. D., S. O. HABERSHON, M. D., J. W. BIGBEE, M. D., T. O. CURLING, F. R. S., and W. RANSOM, M. D. Wm. Wood & Co.: New York.

The volume on Diseases of the Intestines, etc., published by Wood & Co., New York, one of their library of standard medical authors, is the equal of any hitherto issued. Diseases of the intestines, anus, and peritoneum are treated in detail, and their various pathological relations with their therapeutical indications are fully described. The work consists of a series of monographs, prepared by the most distinguished physicians in England. There are chapters on enteralgia, enteritis, obstruction of the bowels, ulceration of the bowels, cancerous and other growths of the intestines, diseases of the cæcum, diarrhœa, dysentery, diseases of the rectum and anus, intestinal worms, peritonitis, tubercle of the peritoneum, ascites and abdominal tumors. Each chapter is by the hand of a master, by authors of recognized ability

and standing, and are so written as to make the work invaluable to the practitioner of medicine.

Handbook of the Diagnosis and Treatment of Diseases of the Throat and Nasal Cavities. By CARL SEILER, M. D., Lecturer on Laryngoscopy, at the University of Pennsylvania, etc. 12mo; pp. 156; with illustrations. Henry C. Lea: Philadelphia.

This little volume, intended by the author as a guide to students of laryngoscopy, is well calculated for its purpose, and will, we think, become a favorite. As all theoretical speculations have been omitted and only points of practical importance discussed, the author succeeds in embodying in his book a large amount of valuable information. The subject matter is, to a great extent, original, and is the result of the author's experience. The directions are short and almost always correct, the instruments recommended few and simple, and the therapeutics such as are supported by the best authority. The book is one which deserves, and doubtless will receive, a favorable reception from the physicians and students throughout the country.

Diseases of the Throat and Nasal Passages; a Guide to the Treatment of affections of the Pharynx, Œsophagus, Trachea, Larynx and Nares. By J. SOLIS COHEN, M. D., Lecturer on Laryngoscopy and diseases of the Throat and Chest in Jefferson Medical College, Philadelphia. Second edition, revised and amended, with two hundred and eight illustrations. New York: Wm. Wood & Co.

The work of Dr. Cohen on the throat, etc., has been for some time out of print, and the author congratulates himself upon the delay in issuing the second edition, as it has enabled him to make considerable additions and alterations. The second edition of Dr. Cohen's book is a large, well-printed and illustrated volume of 750 pages. Some material in the old edition has been suppressed, some modified or augmented, and some added. Certain illustrations have been

discarded and others introduced, and the bibliography has been omitted as being easily accessible elsewhere. In the place of the omitted matter clinical disquisitions have been introduced. Special manipulations, operations and therapeutic measures are described, either when first alluded to, or in connection with the subject matter to which they are most applicable, and are not consolidated in a separate chapter as has been done by other writers. The nomenclature of the last edition of the United States Pharmacopœia has been employed as most suited to the requirements of the American reader. Into the present edition the author's lectures in 1872, 1873 and 1874, before the College of Physicians of Philadelphia and the classes of the Jefferson Medical College, have been incorporated. These changes and additions render the work very complete, and the book will not only be acceptable to specialists, but will make an excellent text-book in this department of medicine.

A Clinical Treatise on the Diseases of the Nervous System. By M. ROSENTHAL, Professor of the Diseases of the Nervous System at Vienna; with a preface by Professor Charcot. Translated from the Author's revised and enlarged Edition by L. Putzel, M. D., Physician to the Class for Nervous Diseases, Bellevue Hospital (Out-Door Department), and Pathologist to the Lunatic Asylum, B. I. New York: Wm. Wood & Co., 27 Great Jones Street. 1879.

Rosenthal on the Nervous System is another volume of the series of Wood's Library of Standard Medical Authors, and is a fit companion to the works which have been previously issued. As Prof. Charcot observes in his preface to this volume, "In any work of recent date upon the pathology of the nervous system, we expect to find, in accordance with a wide-spread penchant, the cries regarding physiological mechanism predominate over the descriptive portions, and even dilated upon at the expense of clinical and anatomo-pathological details—those true foundations of all solid work in this department." This objection does not apply to the

present work. As we might expect in a work dedicated to Rokitansky, special attention is paid to pathological anatomy, and so much care has been bestowed upon symptomatic descriptions as eminently to entitle the book to the name the author gives it, "A Clinical Treatise." Therapeutic measures receive a due share of the author's attention, and especially great stress is laid upon the benefit to be obtained from hydrotherapeutic measures in chronic nervous diseases. As hydropathic treatment appears to be extensively employed both in France and Germany as a valuable therapeutic agent, this volume will be serviceable in calling the attention of American physicians to this hitherto neglected agent. The foreign editions of this work were published without plates, but the translater has introduced a number of wood-cuts (borrowed from various sources) which will enhance the value of the volume, and make it more worthy of the favor it will doubtless receive.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

TROUSSEAU'S CATAPLASM IN THE TREATMENT OF SUBACUTE AND CHRONIC ARTHRITIS.—Take a sufficient quantity of bread (more or less, owing to the size of the joints to be enveloped) cut into thin slices; remove the crust and soak the pieces about a quarter of an hour in water. The swollen pieces are then placed in a piece of linen, and the water squeezed out until the mass seems but slightly moist. It is next placed in a water-bath and allowed to remain for three hours. A portion of the water is again pressed out, and the whole is softened and kneaded for five minutes with champhorated alcohol. The dough is then spread out upon a piece of linen cloth large enough to cover the joint. At the edges the cataplasm should be at least one centimetre thick. Over the surface of the cataplasm the following mixture is poured: Camphora, 7 parts; extr. opii, 5 parts; extr. belladonnæ, 5 parts; alcohol, q. s. The dressing is then fastened on by adhesive strips, and then covered with oil silk to prevent too rapid

evaporation, and over the limb and joint a flannel roller is applied tight enough to exercise a comfortable compression. This is allowed to remain from eight to ten days, and if necessary it is then re-applied. Dieulafoy has tried this remedy with great benefit in a large number of cases and commends it highly to the profession.—*Centralblatt fur Chirurgie.*—*Hosp. Gazette.*

Competitive Examinations.—Above all things let my imaginary pupil have preserved the vigor and freshness of youth in his mind as well as in his body. The educational abomination of desolation of the present day is the stimulation of young people to work at high pressure by incessant competitive examinations. Some wise man (who probably was not an early riser) has said of early risers in general, that they are conceited all the forenoon and stupid all the afternoon. Now, whether this is true of early risers in the common acceptation of the word or not, I will not pretend to say; but it is too often true of the unhappy children who are forced to rise too early in their classes. They are conceited all the forenoon of life and stupid all its afternoon. The vigor and freshness which should have been stored up for the purposes of the hard struggle for existence in practical life, have been washed out of them by precocious mental debauchery—by book-gluttony and lesson bibbing. Their faculties are worn out by the strain put upon their callow brains, and they are demoralized by worthless, childish triumphs before the real work of life begins. I have no compassion for sloth, but youth has more need for intellectual rest than age; and the cheerfulness, the tenacity of purpose, the power of work which make many a successful man what he is, must often be placed to the credit, not to his hours of industry, but to that of his hours of idleness in boyhood. Even the hardest worker of us all, if he have to deal with anything above mere details, will do well, now and again, to let his brain lie fallow for a space. The next crop of thought will certainly be all the fuller in the ear, and the weeds fewer.—*Professor Huxley, in Popular Science Monthly.*

Temporary Blindness in the Puerperal Woman.—This is no longer considered such a rarity as formerly, but is still novel enough to render the following case of interest: A primipara, eighteen years old, was taken with labor pains about 7 A. M. At 10 A. M. the waters broke, and an hour later the delivery was completed. Convulsions followed immediately, lasting an hour. The patient requested that lights should be brought, and could scarcely be persuaded that it was broad daylight. Twenty hours later, when seen by Dr. Walliser, the pulse was 104. Temperature in axilla 38.5° C.; both pupils dilated and fixed. Ophthalmoscopic examination impossible on account of restlessness. There had been no post-partum hæmorrhage. When next seen the pulse was 94; temperature 38° C., and the approach of a bright light caused a slight contraction of the pupils. She could now tell light from dark. On following day pulse and temperature were normal, and she could see fingers held close to the face. The improvement was steady and rapid, and two weeks from delivery she could read the newspaper.—*Walliser, in St. Louis Med. and Surg. Journal.*

Ligature of the Ischiatic Artery.—M. Tillaux related (*Union Med.*, May 20) at the Société de Chirurgie the case of a mason, aged 20, who, having fallen from a scaffold, was brought to the Beaujon in a state of collapse. There was a fracture of the thigh, with a wound which, however, did not seem to communicate with the fracture. During the first fortnight all seemed going on well, when a very painful swelling became developed behind the great trochanter. There was fluctuation, but neither pulsation nor *bruit-de-souffle* in the tumor; and, under the belief that it was a subcutaneous abscess, a vertical incision was made into it, which was followed by a formidable jet of blood. An aneurism being thus the cause of the tumefaction, a large horizontal incision was at once carried through the gluteus to the ischiatic notch, where the artery was found divided as it left the pelvis. A bony splinter, apparently proceeding from the edge of the sacrum, and to which the production of the false aneurism

was doubtless due, and could be felt. The artery was cut through close to the pelvis, and the hæmorrhage instantly arrested by a hæmostatic forceps applied to the central end. This was left *in situ* for forty-eight hours. The patient entirely recovered, forcipressue here having been of great service, seeing the difficulty of applying the ligature or torsion. M. Tillaux drew attention to the singularity that so large an aneurism should have remained twenty days without its existence having been suspected.—*Med. Times and Gazette.*

Disinfectants and Deodorants.—More than half of these agents are valueless in preventing disease, and dangerous as being productive of false security. Heat and pure air are the best of all disinfectants. Where other agents are necessary, the following list will be found useful: Copperas can be used almost everywhere—cheap and efficient. Especially useful in privies, etc. Ten pounds in a pailful of water; a teacupful in bed-pans, chambers, etc., after being used. A quart a day in privies, urinals, etc., for ordinary purposes. In dangerous diseases add from a pint to a quart to each discharge. The contents of a privy six feet in diameter and twelve feet deep will require twenty pounds of copperas to disinfect it. Quicklime and gypsum or land-plaster are good absorbents, and may be used advantageously in damp places, cellars, gutters, etc. They should not, however, be used in drains, catch-basins, sewers, soil-pipes, etc.; nor where they are liable to be washed into such places, lest they by decomposing soap-water, form lime-soap and obstruct the passages. Charcoal is one of the best deodorants, absorbing large volumes of gases; may be used in powder, mixed with lime or gypsum, and sprinkled freely in malodorous localities. Suspended in a basket in cisterns, meat safes, dairies, etc., it tends to keep the contents from absorbing foul odors. Charcoal should be frequently reheated to drive off the absorbed gases and renew its efficiency. Carbolic acid and the coal tar disinfectants are only administered for out-door use on account of their odor. Mixed with gypsum they are valuable around stables, outbuildings, etc. A gill of carbolic

acid in a pailful of water may be used to flush sewers, drains, etc., and in privy vaults and catch-basins. Chloride of lime is sufficiently well known not to need special mention here, except to say that its value is greatly overrated. The addition of strong vinegar or diluted sulphuric acid (oil of vitriol) materially increases its efficiency. Chloride of zinc may be used instead of copperas, and has the advantage of neither bleaching nor staining white or colored fabrics with which it may come in contact. On this account is is especially useful in disinfecting clothing, bedding, etc. Of the large number of proprietary preparations sold for disinfecting purposes it is not necessary to treat in this connection. If further information is needed consult your sanitary officer or family physician. The following general directions are useful in contagious or infectious sickness: (1) The sick person should be restricted to one room or a part of the house separated from the other inmates. (2) Secure proper ventilation of the sick room without producing draughts. Smell is an excellent guide as to the state of air; if air is sweet there is little dread to be felt. (3) The virulence of any poison which causes the spread of disease is greatly increased by concentration in close rooms, and decreased by dilution and free circulation of air. (4) The linen, clothing, bedding, utensils and every object touched by, or in contact with, the sick, should be isolated and, such as will permit, should be thrown into boiling water, there to remain for at least half an hour. (5) The nurse should be restricted to the sick room or otherwise isolated. (6) Remember that disease is communicated by both the poisoned air about the sick, by the clothes and other articles used or touched by them. (7) After the patient leaves the sick room it should be purified and disinfected. Boil everything that will admit of it; scald all utensils; scrub the floors; whitewash ceiling and walls. Empty the room entirely, and leave doors and windows open for at least a day or two.—*Public Health.*

Fatty Embolism of the Lungs following Fractures.—M. Déjerine presented to the *Societe Anatomique* the notes of two cases in which he observed fatty embolisms in the lungs

after fractures. In the first case the lower part of the leg was crushed by a railway car; a longitudinal fracture of the tibia, extending upward into the knee-joint; death followed in two and a half hours. At the autopsy the lungs and heart were removed together and very carefully examined. The blood in the right ventricle contained a large quantity of fat in little drops, which dissolved in ether, and were colored black by osmic acid. The pulmonary vessels were gorged with fat, the arterioles, venous radicles and capillaries containing masses three, four and five millimetres in length, which refracted light strongly, disappeared under the influence of ether and showed, after the action of osmic acid, a deep black color, which traced the vascular net-work almost completely at certain points. The examination of all parts of both lungs gave the same results. The second case was no less convincing than the preceding. It occurred in the service of Dr. Brouardel, of San Antonio, and the lungs were examined in conjunction with M. Mayor. The patient died thirty-six hours after receiving a fracture of the right parietal bone, and, as in the former case, the pulmonary vessels contained fat, but in somewhat less quantity. In neither case were the other organs examined for fatty embolism.—*Le Progres Medical.*

A Surgical Case of Unusual Interest.—A man of forty was admitted to the Pennsylvania Hospital, Philadelphia, on the 27th of April last, in the following extraordinary condition: There was a lacerated wound on the top of his head, three inches long by an inch and a half wide, and very deep. The integument had sloughed or been torn away, the bones were missing, the dura mater was exposed and sloughing, and the brain could be seen pulsating at the bottom of the foul mass. Strange to relate, the patient was perfectly rational, and gave the following remarkable account of himself: He was first officer in a three-masted schooner sailing from the West Indies to New York with a cargo of sugar. He had worked very hard at loading the vessel in the heat, and for two days and nights after sailing for home he

was constantly on the watch. He suddenly became ill, and conceived the idea that the captain and crew were going to murder him and throw him overboard. To frustrate them he thought he would take his own life, and tried to jump overboard but was prevented from doing so. On the fourth day out, when off Cape Hatteras, he got possession of an ax and dealt himself several blows on the top of his head with the handle, fracturing his skull. He then with the edge of the axe chopped out the softened mass, and picked away pieces of the bone. After this his head (mind) got better, he said. On April 25, four days after inflicting the injury, the vessel arrived at New York. The patient walked to the cars and came to Philadelphia. He said that he was a temperate man; that he only took an occasional drink and was not intoxicated when he injured himself. His appearance certainly did not indicate a man of intemperate habits. His story was so unlikely that it was, of course, doubted; but no cross-examination could elicit any contradictory statements, and he persisted in it to the last, bringing no accusation against any one —in fact, volunteering the declaration that the captain and crew were the best that he had ever sailed with. The patient remained in the hospital until May 31, when he died. All pressure had been removed early in the treatment of the case, except where, as it was found, some pieces of bone had been driven down and buried under the sound part of the skull, and these did not produce any immediate paralysis. It was not until the thirteenth day after the injury that the man's left side became powerless. The pressure exerted by these pieces of bone was upon the anterior lobes. The case was regarded by the attending surgeon, Dr. William Hunt, as a fine illustration of the tolerance of these lobes. Both motion and sensation returned when the bones were removed, but the injury was too profound for the amelioration to continue. The post-mortem examination proved the truth of the man's story. The calvaria showed twenty-five or more superficial slits or scratches running parallel with the opening, which were exactly those that the edge of a sharp ax would

have made. No murderer or set of murderers would have made such marks as these, and inflicted them all in one direction.—*Medical Record.*

Anatomy of Tetanus.—Within the last few years many observers have noted changes in the upper part of the spinal cord, the medulla and the pons in cases of tetanus. In a case occurring in the New York Hospital, Dr. Amidon had an opportunity of verifying these observations, and he has endeavored to trace the origin of each set of symptoms to some central lesion. The inflamed pia mater surrounding the cord and including the anterior, posterior and spinal accessory nerve-roots, explained the pain and stiffness in the back of the neck, as is shown by the existence of these symptoms in simple cervical spinal meningitis. On the vascular and cavernous lesions in the whole spinal accessory tract, and the inflamed pia mater about the spinal accessory roots, depended the dysphagia, spasm of the sterno-mastoid and trapezius and spasm of the glottis, the excited state of the hypoglossal contributing to the production of the dysphagia. The lesions of the lower facial nucleus, considered by some as the center for the muscles of the mouth, the only facial muscles implicated, gave rise to the "*risus sardonicus.*" The lesions found in the pons, by their action on the origin of the fifth pair, are outwardly manifested by the trismus, the constant and hitherto unexplained symptom of tetanus. The lesions consisted chiefly of vascular and perivascular dilatations and changes in the nervous substance itself, varying from simple vascular engorgement to areas of disintegration and the formation of vacuoles; they were found in the tracts occupied by the trigeminus, part of the facial, spinal accessory and hypoglossal, while slight departures from the normal structure appeared in the glosso-pharyngeal and pneumo-gastric tracts.—*Archives of Medicine.*

Chest Mensuration in Phthisis.—The following are the conclusions arrived at by Dr. Porter, after several years' attention to this subject: (1) In the normal chest the move-

ments of the two sides are practically equal. This is especially true of the infraclavicular region where the lungs are more nearly symmetrical, and the movements of the chest less affected by irregular muscular development. (2) The relative expansion of the lungs is interfered with early in phthisis by the loss of pulmonary elasticity, and the choking of the alveoli and bronchi. (3) In phthisis the antero-posterior diameter in the infraclavicular region after forced inspiration is greater on the healthy than on the affected side. Conversely, after a forced expiration the diameter of the affected side is greater than that of the healthy side. (4) Age, sex and habit of life may modify the amount of chest-expansion, but only disease or deformity can make any marked difference in the movement of the two sides. (5) Disease may be suspected when the difference in the expansion of the two sides is very small. This irregularity can not be determined with sufficient accuracy by the eye, or even by the tape measure, but a pair of calipers with a graduated scale is necessary.—*St. Louis Med. and Surg. Journal.*

Source of the Alarming Hæmorrhages of Phthisis.—The difficulties experienced when we search for the exact point of the origin of the vascular alterations in hæmoptyses have been a most serious obstacle to an exact knowledge of its pathology. This explains why the discovery of aneurisms of the arteries of the lungs in phthisis is of recent date, since, in spite of a few facts previously published, it is principally due to the researches of Rasmussen, made popular in France by Professor Jaccoud. Having had occasion to observe two cases of fatal hæmoptysis in my service at the Laennec Hospital, I have been fortunate enough to discover easily the point of origin of the hæmorrhage by the aid of a method of which I wish to explain in a few words. The first idea which comes to the mind in making these anatomo-pathological researches is to open the bronchial tree, in following the branches by which it comes into the trachea. It is impossible in this way to find the ruptured vessel, for the trachea, as well as the large and small bron-

chial tubes, is filled with a bloody mucus which everywhere appears nearly the same. The mechanism of these terrible hæmorrhages is as follows: The blood flowing from the arterial perforation into the cavity flows continually into the corresponding bronchial tube, thence into the trachea, where by the respiratory movements it is mixed with air. It results, therefore, the acts of inspiration draw this bloody mucus into the bronchial ramification, so that the subject succumbs not so much by the amount of blood lost, as by the obstacle to respiration produced by the presence of a liquid in the air passages. This was the cause of death in the two patients mentioned in this communication, and I am convinced that it is the rule in the majority of cases. To discover the vessel whence the blood had during life proceeded, I placed a canula in the pulmonary artery and injected water. Finding this came out by the right bronchus, I then fixed the canula in the right branch of the pulmonary artery, opened the principal bronchial tubes, and again injected. Then finding the liquid issuing from a single lobe, the canula was fixed into the vessel of this lobe, and the corresponding bronchial tubes being cut, the injection continued. It was now easy to follow, by dissection, the bronchial tube from which the water issued, and to come directly upon the cavity and see the liquid issuing by the perforation of the artery. In this preparation I show you a branch of the pulmonary artery of the third or fourth order, adhering to the wall of the cavity into which it projects. The ulcerative process which has continually enlarged the cavity in the pulmonary tissue has respected the arterial tunics, which it has partially isolated from the tissue of the lung surrounding it; but under the influence of the ulceration the artery is altered at a portion of its circumference. The vascular tunics, weakened by disease, yield to the pressure of the blood, and, distending, form a true aneurism, whose coats are the internal and middle coat of the artery implicated. The walls of these small aneurisms are still further weakened by a caseous degeneration of their elements, and finally burst, producing hæmoptysis. In the first of my cases, a young man of twenty-five

years had pulmonary symptoms for eleven months. Signs of large cavities existed at the apex of the left lung. A first hæmorrhage, estimated at six ounces, stopped easily; three days after it was renewed, and the patient died in about a quarter of an hour, after losing about two quarts of blood and mucus. The post-mortem showed a sacciform aneurism of the size of a large nut projecting into the cavity, and developed on an artery of the third order, which also projected from the wall of the cavity. In the sac were two perforations, one-eighth of an inch in diameter. In my second case, besides the pulmonary aneurism which caused the fatal hæmorrhage, I found another unbroken in a cavity in the opposite lung.—*Gaz. des Hopitaux.*—*Western Lancet.*

The Causation of Sleep.—The learned German alienist, Dr. Siemens, concludes that sleep is due to the activity of certain circumscribed parts of the brain which form an inhibitory center, and which are situated in the medulla oblongata near to the convulsive center. In support of this view, the connection between sleep and epilepsy is alleged. The inhibitory sleep center stands in direct antagonism to the cerebral cortex; if the one is in a state of activity the other remains passive; the former can only exercise its function when the cortical substance is either inactive or nearly so. Sleep is much more easily induced in childhood, as the convolutions of the brain are at that time only partially developed. Sleep is also much more frequent and continuous when the cortical substance has degenerated, as in paralytic dementia; when its nutrition is faulty, as in anæmic conditions; also when it is to some extent paralyzed by the action of hypnotics or by excessive cold. On the other hand, no sleep can be obtained when the cortex is in a state of activity, due to strong psychic impressions, excesses, alcoholism, or any form of mental disease. When, owing to some morbid condition, sleep has been absent for a length of time, the products of fatigue must have been generated in the body in large quantities, but still the hyper-activity of the cortical substance prevails and prevents the occurrence of sleep.—*Med. and Surg. Reporter.*

An Excellent Substitute for Cod-Liver Oil.—Dr. Thomas Addis Emmet (*Prin. and Prac. of Gynæcology*) recommends as a good substitute for cod-liver oil the fat of pork. For its proper preparation he gives directions as follows: A thick portion of a rib piece, free from lean, is selected and allowed to soak in water for thirty-six hours before being boiled, the water being frequently changed to get rid of the salt. It should be boiled slowly and thoroughly cooked, and, while boiling, the water must be changed several times by pouring it off, and fresh water, nearly boiling, substituted. It is to be eaten cold in the form of a sandwich made from stale bread, and both should be cut as thin as possible. It is very nutritious, but it should only be given in small quantities until a taste for it has been acquired. It is the most concentrated form in which food can be taken in the same bulk, and I have frequently seen it retained when the stomach was so irritable that other substances would be rejected. For this condition of the stomach it may be rubbed up thoroughly in a porcelain mortar, and then given in minute quantities at a time. It is made more palatable by the addition of a little salt, and this will be well tolerated, while the salt used for preserving the meat, having become rancid, if not soaked out will produce disturbance, even in a healthy stomach. For obvious reasons it is best not to inform the patient of the nature of this food until she has learned to relish it.—*Detroit Lancet.*

Poisoning from Carbolic Acid.—The *British Medical Journal* quotes Dr. Küster's recent study of this subject. The symptoms are classified in three different stages, according to the severity of the case. In the first stage, often the only symptom of poisoning is the change in the aspect of the urine. In the second stage the digestion is impaired, the pupils move with difficulty and the temperature is high. This last symptom is regarded by the author as being almost identical with the fever described by Volkmann under the name of aseptic fever. He explains chronic carbolic acid intoxication by supposing that large quantities of the drug, being re-

peatedly at short intervals introduced into the system, continually deprive the tissues of sulphuric acid by absorbing it, and thus impoverish them. The third and most severe stage of poisoning is characterized by the well-known brain symptoms. Occasionally muscular trembling and convulsions have also been observed in man, but only to a slight degree. The following symptoms seem to predispose the system to carbolic acid intoxication: 1, anæmia; 2, septic and pyæmic fevers, and other weakening agents; 3, infancy; 4, a peculiar individual idiosyncrasy; 5, the spot where the acid has been introduced into the organism. Husemann holds that it is most apt to produce poisoning when introduced into the circulation, less so if given hypodermically, still less if given in the form of enemata or rubbed into the skin or applied to internal surfaces, and finally, if inhaled. Sulphate of soda has often been recommended as an antidote to carbolic acid, but Dr. Küster has not found it to answer in severe cases. In order to avoid intoxication, he advises to wash out large cavities with an 8 per cent. solution of chloride of zinc, instead of carbolic acid. A 2 per cent. solution of the latter may, however, be used without danger for children and for operations in the abdominal cavity.—*Med. and Surg. Reporter.*

The Treatment of Obstinate Retroflexion of the uterus.—Dr. Schultze proposes a plan for the cure of obstinate retroflexion based upon the behavior of the uterus in involution after delivery or abortion. He has observed that the uterus in such cases, if it is kept by a pessary in normal position during the process of involution, will afterward retain its position unaided, even though the flexion may have been of old standing, owing to the renovation of the whole tissue which has taken place. He proposes, therefore, to institute a process in some degree analogous to involution, by first of all dilating fully the cervix by laminaria tents, and then repeatedly injecting a solution of carbolic acid or a dilute solution of perchloride of iron, the effect of which is to excite uterine contractions resembling those of labor. After full dilatation of the cervix the finger is first introduced into the

uterus fully up to the fundus, and by its means reduction is effected more safely than by the sound. Moreover, if any adhesions exist, tethering the fundus backward, their existence and position can thus be clearly made out. During the process of reaction the uterus is kept in place by the author's figure-of-eight pessary, and he finds that in this way it becomes sensibly reduced in size, and that the pessary may eventually be dispensed with. The author considers that dilatation by laminaria tents is quite free from danger if the precautions recommended by him (*Centrlabl. fur Gynak.*, 1873) be taken. In very nearly 400 cases of their use within a single year, he has not seen a single one of parametritis, of temperature over 38° C., or of any other normal reaction. —*Centralblatt fur Gynakologie.*

MEDICAL NEWS.

"Nulla dies sine linea."

Dr. Edward Warren (Bey), the eminent American physician, has just received the decoration of Chevalier of the Legion of Honor. He resides permanently in Paris.——— Dr. Campany, the military physician who was engaged in the sanitary arrangements during the construction of the Suez Canal, is about to be sent to Panama to ascertain what measures will be necessary for the preservation of the health of the laborers who are to be recruited in South America for Mr. Lesseps's scheme.—*Med. and Surg. Reporter.*——— Her Majesty, the German Empress and Queen of Prussia, offers a prize of 2,000 reichmarks ($480) for the best essay on "The Essence of Diphtheria and the Results of Treatment of the Disease based upon Knowledge of the Nature of the Affection." The prize will be given only for such work as contains important new facts regarding the essence of the disease, but particularly concerning its mode of propagation and the prevention of the same. The essay may be written in German, French or English, and must be forwarded to B. von Langenbeck, Professor, Berlin, N. W., 3 Roonstrasse,

before the first of December, 1880. The prize will be awarded at the first meeting of the German Surgical Congress in April, 1881. Each essay must be marked with a motto, and the same motto must be placed on an accompanying envelope that contains the author's name. The committee consists of Professors Klebs, of Prague; Liebreich, of Berlin; von Nägeli and Oertel, of Munich; Thiersch, of Leipsig; Virchow, of Berlin, and von Langenbeck, of Berlin.—*Medical Record.*———In the *Centralb. fur Med. Wis.*, July 12, Dr. Albert Neisser, of Breslau, announces the discovery of a peculiar form of micrococcus in gonorrhœal pus. It is circular or oval in outline, not colored by indulin or methylgreen, usually in colonies of ten, twenty or more, surrounded by a membrane, generally found on the upper surface of the pus cells, rarely on the epithelial cells. Dr. Neisser found these bodies in the gonorrhœal discharges of both sexes, in acute and chronic cases, and in various cases involving the eyes. He believes they are characteristic of the disease, though he does not express himself positively on their pathological significance.—*Med. and Surg. Reporter.*———Dr. Hardaway writes of hyposulphites in smallpox in the St. Louis *Courier of Medicine*: When Inspector of Smallpox in this city, during the epidemic some years ago, I had many hundreds of cases of variola under my observation, with the opportunity of testing various plans of treatment in that disease. As the result of my experience, I came to the conclusion that the hyposulphite of sodium was an invaluable remedy for smallpox. If Polli's theory of the action of these drugs is at all tenable, then surely they are indicated in variola. Owing to the influence of previous vaccinations in modifying smallpox, it is particularly difficult to arrive at any very exact conclusions as to the effect of medication; but, having treated all types of the disease and many unvaccinated children with the hyposulphite, I am prepared to state that my results were highly encouraging. One thing that I frequently noticed in using the hyposulphite was the prevention or modification of the pitting—a result that, with my present experience, I would be led to expect.

———Concerning a curious relation of religious belief to epidemics, the Montreal *Witness* states that diphtheria is more prevalent among the Protestant section of Montreal community than among the Catholic. It is not a mere coincidence, nor is it of a temporary character. A study of the health statistics of Montreal for several years past reveals the same state of things. It is the more peculiar, inasmuch as the general death rate is much higher with the Catholics, particularly so in contagious diseases, and conspicuously so in the case of smallpox. But these admit of explanation. The only solution of the problem seems to be that the bulk of the Protestant community resides in the upper part of the town, where the drainage is less perfect than in the lower town. ———The Hahnemann Medical College, of Chicago, was charged before the Illinois State Board of Health with issuing diplomas to persons who had not attended two full courses of lectures at the college. These charges were, moreover, amply proved, and finally acknowledged. Yet, on the ground of the "doctrine of equivalents," and of "testimonials," as many of which were produced as is necessary to start a quack medicine, the board concluded by affirming the good standing of the college. This is one of the weakest acts we have yet heard of about that board.—*Med. and Surg. Reporter.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The Report of the State Board of Health.

Fearfully and wonderfully we are made, and fearfully and wonderfully do some of us die. We have lately been looking over the report of the State Board of Health, to which our attention was called by Dr. A. W. Morris, and find therein set down as the causes of death a fearful array of known and unknown diseases. Dr. Morris copies the following as samples of the causes of death, as set down by the reporters. There may possibly some doubt arise as to

whether the patient did not die of the attendant rather than of the reputed cause. It is at least barely possible. As a complete reply to the slanders of a partisan press about the ignorance in Kentucky, we note that "information" carried off a man in Edmonson County. What was the peculiar character of the information which destroyed this unhappy man we do not know, but others are reported to have died of information of bowel or liver. "Eating walnuts" slew a Livingston man; Rockcastle had a case of "falling of the brain;" Robertson County, "sun-stroke in November." Other counties report death from "bald hives," "liver," "nothing," "sore head," "fractured brain," "side pleurisy," "fever," "sickness," "lung disease, "aneurism of arteries," "pnebassis of brain," "pain in the knee," "something like scrofula," "disease of the female," "bone fever," and Elliott County reports two deaths from "come too soon," thereby showing that an early start in life is not always the best. That fearful disease, "spinaljetus," let fly at a man in Adair County and promptly brought him down. We suppose, upon reading the above account, the usual cry of medical reform will be raised. But the only way to reform the profession is to reform and inform the people. The medical man is taken from the people, is a representative of the people and, in our opinion, is generally a favorable specimen of the class he represents. We at least notice that the faculties of the schools who raise the greatest outcry about reform are usually run under clerical influence, the known enemy of intelligence, and generally would themselves be benefited by a little scholastic training. Like produces like, and we fear until the mass of the people become civilized, the mass of the profession will not become much their superior.

NOTICE.—Our delinquent subscribers are again asked to make an effort to send in their remittances. This will save us much trouble, and also spare many the annoyance of again receiving another statement of account. A prompt response will oblige us.

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XXVIII.] OCTOBER, 1879. [No. 4.

ORIGINAL COMMUNICATIONS.

"Qui Docet Discit."

ART. I. *The Pessary as a Remedy in Prolapsus Uteri.* By L. B. JOHNSON, M. D., Walhalla, S. C.

The pessary is an instrument of the remotest antiquity, having been used by even Hippocrates himself. The Arabians, the Egyptians, and the physicians of all the ancient nations resorted to the use of the pessary for all cases of prolapsus of the womb, and also used it in a medicated form for leucorrhœa and other vaginal discharges. It is hardly probable that there is another instrument or apparatus for medical or surgical application to the human body that has undergone so many changes and been presented in such a variety of shapes as the pessary. Not only the different forms of this instrument, but the materials of which it is composed, are legion; and the shape and composition of this little instrument are to-day undergoing more rapid changes, and more new patterns are being presented to the profession now, than probably in any other quarter of a century for the last eight hundred years.

We find the pessary composed of wood, leaves of plants, lint or rolled linen, gum, resin, wax, sheep's bladder filled with air, wool, cork, horn, ivory, leather, and metals (such as silver, silver plated with gold, platina, copper, lead, and tin). Glass at one time was very popular on account of its resisting the vaginal and uterine secretions. Then caoutchouc being introduced into the arts, experts in gynæcology were

not to be left behind, so they took advantage of the progress of the times, and now the pessary is manufactured almost entirely of this great and wonderful production.

Until very recently the propriety of using the pessary was never questioned. A woman informed her physician "she had falling of the womb," and without any special examination, often not even by interrogation, a pessary was prescribed. By the young and inexperienced physician, it was prescribed because he was taught it was the panacea for all such troubles; by the old and more experienced doctor—one who knew how unsatisfactory the results of this mode of treatment were—it was prescribed because this was the easiest way to get rid of his patient. And this practice of putting off a patient without giving her the substantial aid she is entitled to at our hands seems to be encouraged by the teachers of gynæcology, when they almost indiscriminately recommend the pessary as a remedy in prolapsus uteri.

Meigs says: "We can not treat prolapsus without the pessary." Leveret says: "But few women are ever cured of descent of the womb," and consequently recommends the use of the pessary. J. Marion Sims, in recommending a pessary, recently said: "Specialists may not adopt it, but it must of necessity become of real help to the busy general practitioner"—that is, of greater help to the physician than to his patient. Heberden says: "You might as well treat fractures without splints as these affections without some mechanical stay or support."

We will now proceed to discuss the pathological condition of the generative organs in prolapsus and the adaptability of the pessary as a remedy. In considering the subject of prolapsus of the womb it might be well to go back for a moment and take a cursory view of the womb and its supports in their normal condition.

Those who have had an opportunity of examining the organs of generation on the cadaver doubtless have observed the correctness and lifelike appearance of the descriptions given in the text-books by our various authors, of their anatomical structure and relation to each other.

We find the womb occupying the center of the pelvic cavity, in dimensions about three inches in length, two inches across its broadest part, and about one inch in thickness. At puberty it weighs about one and a half ounces. It is divisible into fundus, body, cervix, and os uteri, with its cervix resting on and forming connection with the superior part of the vagina. By the walls of the latter attaching to the neck of the womb, ordinarily about three-fourths of an inch above the most dependent part of the neck, the neck is left projecting into the vagina. This is usually termed the sub-vaginal portion. In some women we find this connection of the two organs to take place nearer the os uteri; in fact, in some women it seems to be a blending of the tissues of the two organs in such a manner as to make the passage from the vagina into the cervix continuous. In this condition of the parts the upper section of the vagina is more contracted than in the former, and in this latter condition I have seldom met with a case of prolapsus; the peculiar anatomical structure of the neck is not so favorable to congestion as in its more natural condition.

The womb in its natural and unimpregnated condition is bounded in front by the bladder, in the rear by the rectum. The peritoneum falling over the organ as a mantle in front, it passes down the walls of the womb to near the bladder, and is reflected over the bladder. In the rear it passes down to the rectum, but not so low down the walls of the womb as in front, and is then reflected to the rectum; latterly it falls down and extends, under the name of broad ligaments, to the ilia. In the folds of the broad ligaments we find the round ligaments of which so much has been said as supporters of the womb. These ligaments are attached, or rather proceed, from the superior third of the womb, and pass downward and forward, and are attached by their lower extremity to the pubic region. Now, on the round ligaments has been placed by many the burden of keeping the uterus in its natural position. That the broad ligaments have a beneficial tendency to keep the womb in position latterly, and the round ligaments in preventing the womb from tilting over posteriorly, we do not

deny; but how the round ligaments can be of any service in keeping the womb in its elevated position, and prevent its prolapsing or sinking down, is more than I can see.

The round ligaments at best are really very small muscular cords, with one end attached to the upper third of the womb and the other end attached to the body at a point much below the organ they are to sustain. Now, if these ligaments were composed of unyielding material like bone, we might understand how they could keep the womb from falling down; but these ligaments, as already said, are muscular, and when the womb descends the ligaments will not support even their own weight, but will sway over to one side, double up on themselves, and come down even in advance of the organ it is claimed they are to support. And when on the cadaver this state of things is found, we are told that the ligaments were relaxed, debilitated, and unable to support the burden nature had imposed upon them.

If the direction of the round ligaments had been reversed and their pubic extremity attached, say, to the promontory of the sacrum, then we could see how they might support the uterus when in a normal and unimpregnated condition, just as they now oppose the ascent of the womb in pregnancy; in some cases setting up such a determined resistance to the natural upward tendency of the womb as to give rise to a severe and agonizing pain in one side or the other.

To our mind the great pillar of support to the womb in its natural and unimpregnated condition is the vagina, supported and abetted by the areola tissues anterior and posterior to the vagina. The vagina is peculiarly created, being, as it were, a hollow pillar composed of a succession of folds and lamina of a peculiar elastic structure, and this pillar is based on or supported by the powerful and contractile levator ani and constrictor ani and vaginæ muscles.

Prof. Bedford says: "The natural foundation of the uterus, and that which gives it due support under ordinary circumstances, is the vagina." Prof. Keating says: "The vagina, though described as a hollow tube in the healthy state, by the coadaptation of all its sides, presents a solid column beneath

the womb. It must also be observed that the pelvic floor itself is dependent, not merely upon its textural contractility, but on the muscular power of the levator ani muscles."

View for a moment the natural action of these muscles and the tissues composing the vagina during great efforts at defecation, when the party sits at stool for a considerable time, and effort after effort is repeated to produce an action. Now, by a terrible effort, the diaphragm, the adominal muscles, are all brought into action; the bowels, the womb, the ovaries, are brought down so low as to press the perineum even below the floor of the pelvis. The effort ceases, the muscles relax, and with this relaxation the levator muscles restore the perineum to position, the erectile tissues of the vagina restore this organ to its wonted length and the womb to its natural position.

Thus the parts continually act when in a normal condition, and so long as they are in a normal condition it would be next to an impossibility to produce a prolapsus uteri from a fall on the breech or feet. In the case of a fall, we don't deny that the concussion would bring down many degrees the stomach, the bowels, and the womb, just the same as occurs from straining and tenesmic pains at stool; but as soon as the shock is ended.or the tenesmic pains cease, the organs instantly rebound and occupy their original position, from the great contractile powers of the levator muscles and the peculiar textural properties of the tissues composing the vagina.

How is it in labor? How low do we find the os before the the head finally escapes? And immediately after the delivery of the child, and even before the delivery of the placenta, how high do we find it? What else but the naturally endowed elastic powers of these parts could so suddenly reposit the womb in its high and natural position?

Let us now see what, then, are the causes of prolapsus uteri. The old authors gravely tell us a large pelvis, repeated pregnancies, poverty compelling women to be much on their feet, carrying heavy burdens, falls upon the feet or breech, sneezing, straining at stool, horseback exercise, or riding in a carriage, they say, will produce it. Almost every motion,

natural or unnatural, made by the body has been set down as a cause of prolapsus. Judging from the catalogue of causes of this trouble, one would suppose the womb to be a very troublesome little member, and that the Great Architect had made a very poor affair when he constructed this part of the human body.

Before proceeding let us look at the causes above enumerated and see if they can stand a scrutinizing view. A large pelvis is put down as a cause; if a large pelvis will give rise to prolapsus in one woman, why not produce it in all women who have large pelves? If carrying heavy burdens produces prolapsus uteri, then why are not all the plantation negroes of the Southern States affected in this way? Instead of this being true, however, my observations, and those of other physicians with whom I have conversed, go to show that the negro is seldom ever afflicted in this way; and when we do meet with prolapsus in the negro, we find at least twenty per cent. of the cases occurring in slender, delicate housemaids. Sneezing, an involuntary act that all women are subject to, is listed as a cause of prolapsus. If this be so, it occurs at almost the very first act of their life, and we find them subject to falling of the womb from the very first moment of their existence. Poor, frail, delicate, suffering creatures! subject to this terrible and disgusting malady from the very first inspiration of life! Certainly they should stand very near and dear to the stronger sex, and have all the sympathy, love and support it is in their power to render them.

But is this the true state of facts? Not by any means. The causes above enumerated have no more influence in producing prolapsus uteri than the moon has in controlling the menstrual epoch. Cause and effect have the same relation to each other in one instance as in another. Take, for instance, a glass and toss it into the street; will it not be broken? Repeat this experiment time and again, and the result will be the same each and every time. But such is not the case in the causes laid down for our guidance in prolapsus uteri. If, then, we reject the above as rational causes of prolapsus, we ask again, what are the causes of prolapsus uteri?

Irritation, inflammation, but usually congestion, with engorgement, are the predisposing causes of prolapsus. In congestion we have distension, heat, unpleasant or deranged sensation, as a feeling of fullness, weight, or oppression, but seldom any great pain unless the disease amounts to inflammation or has already terminated in ulceration. Hæmorrhages from the distended vessels of the cervix are not uncommon; hence the patient will tell you "she is irregular, having her sickness every two weeks, and upon the least exertion it comes on." In this condition of the parts we find impairment of function, disintegration of the parts, and an utter incapability of performing their usual offices, in consequence of structural changes. And this morbid condition thus brought about destroys the elastic properties of the vagina and disables it from performing its natural functions, and in consequence of absorption of the elastic cellular tissues the vagina becomes relaxed and shortened, and the womb in consequence also settles down, and we have prolapsus uteri. Let this cause be repeated time and again, and the same result will follow each and every time, whether the patient be a delicate body or a woman subject to all the toils and hardships imaginable.

Duparcque says that "engorgement from congestion may pass into the condition of sub-acute inflammation, and thence into the most profound organic transformation; and this condition of the parts may serve as a prodrome to the hæmorrhagic engorgements that often excite sanguine discharges." Druit says: "Congestion may cause hæmorrhage, serous effusion, ulceration, and gangrene." Let these predisposing causes exist and a fall on the breech or a heavy jolt may make the woman sensible of the existence of her trouble for the first time. But keep her generative organs free from disease and in a healthy normal condition, and no concussion, however great or from whatever cause, short of producing violence to the internal parts, can produce prolapsus uteri.

Taking this pathological view of this disease, is the pessary applicable in the treatment of prolapsus uteri? This instrument has been in the hands of the profession for more than

one thousand years, and to-day its application as a remedy is as unsatisfactory as it was in the first decade of its existence. "Science possesses for these displacements a treatment far more rational and efficient than the pessary, and the result of long and faithful application of these instruments is sufficient evidence of their utter inefficiency to cure prolapsus uteri." The constant use of the pessary will produce irritation, dilatation, relaxation, absorption of the tissues, and eventually ulceration. Introduce a pessary of two inches in diameter into a vagina whose diameter is naturally one inch, and the tendency of the pessary will be to dilate the vagina to the size of the pessary. After twelve months time remove this pessary, and if no other damage is done, that part of the vagina occupied by the pessary will be found dilated to the extent of the pessary, and if the woman is otherwise in a healthy condition, it will take the parts months to resume their natural condition.

This constant application of the pessary not only has a tendency to produce this dilated condition, but if kept up, will produce congestion, engorgement, and inflammation of the cervix and walls of the vagina; thus it is that the pessary produces the very identical trouble that we are taught it will remedy. Whitehead says "the use of the pessary in this disease is altogether unscientific and ineffectual, invariably aggravating the disease for the relief of which they are employed; they extend the inflammatory condition of the cervix, and frequently create it in those in whom it did not previously exist; they irritate and often completely destroy the healthy tone of the vagina, augmenting the leucorrhœal discharges, and unless very frequently removed, are liable to detain the morbid secretions for an indefinite period within the cavity; they have also a tendency to encourage putrefaction, and thus to originate a source of constitutional irritation sufficient to derange the general health in a most serious manner."

If the pessary is the remedy for such troubles, it is rather remarkable that so many disasters follow its use. Examine the authors who hold up the pessary as the remedy in prolapsus, and you will find they all have a number of horrible

cases to relate, where they have extracted, with forceps or hooks, pessaries, fragments of pessaries, and calcareous deposits from their use; how they have stood aghast and beheld its work of destruction, the vagina ulcerated, even excavated, and forming one of the most disgusting and loathsome diseases that a female is subject to. And still this same teacher will stand before his class and insist that this is the remedy for prolapsus uteri.

I will now close this article by illustrating the ideas I have endeavored to communicate by extracts from two cases—fair samples of such as are constantly occurring in my practice:

Mrs. S. came to our village in the spring of 1875, as she said, to die. She had been under the care of some half dozen of our most distinguished surgeons in two of our Southern cities. Her friends prevailed on her to make one other effort to live, and call me to see her. To this she reluctantly consented, as she had the utmost confidence in those who had formerly treated her. She told me that she had falling of the womb, and there was no use in trying to cure her, as she had used almost all the pessaries that had been made; whereupon she opened her trunk and displayed such a collection of pessaries as I had never witnessed before outside the sale-room of a first class instrument-maker's establishment. After spending some time in consultation with her, she finally consented to have the womb examined with the speculum—an examination that had never been made or proposed before, notwithstanding she had been under treatment over two years. Upon specular examination, I found the anterior labium ulcerated and excoriated; the cervix beyond was congested and engorged, enlarged and spongy. Notwithstanding she submitted to this examination, she seemed to have done so more for my gratification than that she expected to obtain any benefit therefrom. So firmly had it been impressed upon her mind that if she could not be cured by the pessary she was beyond all hope, that it was with the greatest difficulty I could prevail upon her to submit to treatment, and that, too, only after I had endeavored to show her that beyond every possibility of a doubt she could be restored to perfect health, and

that, too, without the use of the pessary, after a few months' treatment.

The treatment consisted of the free application of solid nitrate of silver to the diseased parts, repeated every eight days; daily injections with sulphate of zinc; and internally fluid extract of ergot, tonics and a generous diet. This lady recovered in about five months, soon afterward conceived, and has enjoyed perfect health ever since.

Mrs. K., a resident of one of our Southern cities, came to Walhalla during the spring of 1878 to put herself under my care for treatment. For three years she had been suffering from all the symptoms of prolapsus uteri. At this time the weight and heaviness in the hypogastric region was so great (notwithstanding she was wearing a pessary) that she could scarcely walk across the room; and from the excessive discharges and their offensiveness, she was very much alarmed for fear she had a cancer. Upon interrogation I found she had suffered from this disease some three years, and had been treated for falling of the womb with the pessary. Eighteen months previous the last one, a soft rubber cup pessary, had been introduced, and had never been removed or examined, notwithstanding she was under the special eye of a leading physician and professor in one of our prominent schools. She, too, had been imbued to such an extent with the idea that the application of the pessary was the only remedy, the panacea for all her troubles, that it was with considerable hesitation she consented for me to remove it, until I told her that it was a putrefying and stinking mass. She was fearful lest she could not walk without it. I told her I would not leave her in a worse condition, as she could walk but little with it. The discharges in this case were so excessive and so exceedingly offensive that it was several days before I could use the speculum. After a free application, however, of water, with disinfectants, for a few days, I applied the speculum and found the cervix engorged, around the orifice a large granulating ulcer, and an extensive ulcer on the anterior wall of the vagina, where it was pressed upon by the pessary.

The local treatment consisted in the free application of solid

nitrate of silver every eight days, with injections night and morning of sulphate of zinc; and with fluid extract of ergot internally and bitter tonics. I never confined her for a moment to the bed, and restricted her only from taking walks. And though the cervix was resting on the perineum, this treatment was persevered in; and as the disease yielded and the generative parts were restored to a healthy state, the os could be observed to mount gradually higher and higher, until it finally occupied its natural position. And when the treatment was ended and her disease removed, she could walk, ride horseback, dance, sneeze, without producing a return of her disease, and without any inconvenience whatever. I have recently heard from this lady, and she continues in perfect health.

ART. II. *Yellow Fever.* By E. H. ANDERSON, M. D., Kirkwood, Miss.

The prominent topic engrossing the attention of the medical profession, as well as the minds of all who dwell along the valley of the Mississippi, from Kentucky to the great gulf, is what I now propose to consider. There has ever existed an innate horror of pestilence, but the invasion of yellow fever in the past season seemed to appall the senses, and where the impulse of instant flight was not obeyed, human nature was summoned to an ordeal where was displayed all the higher and nobler, as well as the sordid and baser, qualities which are its attributes. In this terrible drama the medical profession assumed its role and acted its part with an earnestness, zeal self-sacrifice and manliness, which should prove to the world that, among the liberal professions, there is no other higher in its aims or nobler in its practice than the science of medicine. An old writer has well and truly said:

> "A wise physician, skilled our wounds to heal,
> Is more than armies to the public weal."

In regard to the subject under consideration the profession has to confess to a degree of ignorance as to its cause that is truly humiliating. Its nature is so subtile and obscure as to be a subject of theoretical speculation alone; and were its

effects not amenable to pathological and physiological laws with which we are familiar, we could adopt no plan of treatment. Theories are various as to its local origin, its portability and its diffusibility. Its appearance at various points last summer, where the first subjects had been exposed to no known contagion, and its virulence and malignant type, where it had never been seen before, are new features and very suggestive. The theory of importation of the germ from Cuba and South America to our ports, and thence inland from the gulf coast, is the predominant one, and hence quarantine is looked to as our only safeguard. That the germ is imported and propagated there can be no doubt, as cumulative evidence proves it, yet, as I shall undertake to show, the germ of yellow fever is indigenous to our soil, or certain localities, and it may become an epidemic, and of the the most virulent type, where there could have been no foreign importation.

As far back as 1793, when the yellow fever prevailed in Philadelphia, when the city was in the infancy of its hygienic and sanitary condition, Dr. Benjamin Rush attributed the fever, not to importation, but to a mass of decomposed coffee lying in the docks and on the wharf. The advocates of importation would, undoubtedly, contend that the germ was brought in the vessel or the coffee from Rio. Dr. Rush, one of the great luminaries of our profession, did not think so, and attributed the fever to the noxious exhalations emitted from the damaged or decomposing coffee.

Professor Thomas Watson, a writer of high reputation, but echoes the opinion of a large proportion of the medical fraternity of the present time, when he says: "The evidence of the invariable origin of yellow fever from a specific poison existing in the air of the localities where it prevails, and produced from causes there existing, is, in our opinion, conclusive and irrefutable." He also denies its propagation by contagion. His opinions are in accord with those of an eminent British commission appointed a few years since to investigate the subject. On the other hand, many of our most eminent medical experts and scientists are of the opposite opinion,

and when doctors disagree who shall decide? This contrariety of opinion is the result of ignorance of the cause; and until scientific investigation shall define this and give it "a local habitation and a name," we will continue to stumble over uncertainties, and grope our way in conjectural darkness.

What is this morbific agent or germ, whether generated in Rio de Janeiro, Havana, New Orleans or along the Mississippi Valley? Is it a vegetable germ or living insect? Some assume to say that malarial fevers are produced by a malarial fungus or plant, and the yellow fever by a specific fungus or plant, and both being generated in paludal districts and under like atmospheric conditions, may prevail simultaneously, though a season, or seasons consecutively, might foster one and not develop the other. Regarding this as a wild, speculative theory having neither facts or analogy to sustain it, I shall dismiss it without comment.

LOCAL GERM THEORY.

In regard to the germ, whatever it may be, it must, at least, be reproductive, and under favorable circumstances must multiply rapidly. The usual local and atmospheric conditions under which malarial fevers and epidemic yellow fever prevails, is highly suggestive of insect life. Neither is prevalent in a wet or cool summer, but both do occur after the evaporation of heavy rainfalls; each under its own meteorological law. The one, malarial fever, being indigenous and endemic and annual throughout the paludal lands of the continent as a summer or autumnal fever; and the other, yellow fever, an occasional epidemic, prevailing only in seasons marked by dampness and high and long-continued thermometric heat. A prerequisite condition to either form of fever is an exposed surface, below the average level, which had been previously covered with water, subjected to the heat of the sun, and not for one day only, but for a succession of days; for I contend that yellow fever never does prevail where the rains are sufficient throughout the season to keep the bottom land covered, or keep the surface soil continually damp.

HABITAT OF THE GERM.

This uncovered paludal land is, in my estimation, the nidus, and the best nidus, for the generation of insect life that nature furnishes. An insect's instinct would naturally attract it to such a locality, as it would there find the best natural conditions for hatching its eggs, and food for its young in the putrescent matter that always exists there in greater or less quantity. There will be found water passing into vapor, engendering more telluric heat than elsewhere; and likewise the heat generated by the fermentation and decomposition of vegetable and animal matter, mephitic gases and all the elements of the cess-pool. There would you also find an infinitude of microscopic scavengers, luxuriating in the bounties which, in many instances, the sanitary commissions of our cities permit to accumulate, and unwittingly furnish pabulum for yellow fever. As an illustration of this theory, let me cite the sewer of Grenada, whence the Iliad of her woe sprung, and also to Bayou Gayoso, Memphis. These and similar places are the fountain-sources of the germ of all malarial or yellow fever, and the two differ only in degree. In the one case less of the poison is taken into the system, and meteorological surroundings modify the effects.

As a microscopical animalcule has been discovered both in the black vomit and blood of those affected with the disease, and as man has no such parasites, it is natural to infer that this was the morbific agent. If an insect, the portability of the disease may be explained, and its contagiousness at once settled negatively. That is, it might be propagated under favorable circumstances within circumscribed limits, but could not be contagious and could not exist in a pure atmosphere. It might likewise be fostered in a house or other protected places in a warm temperature, when it would be utterly destroyed in the outer cold air, particularly by a freeze. On this animalcular theory you may see clearly why it would be indigenous and perennial in Havana at an annual mean temperature of 77° F., when it would be frozen out or hibernating on our continent.

While the epidemic was prevailing last summer, I was

often struck with the remarkably quiescent state of the atmosphere from an hour before, until an hour after, sunset. This was a marked feature from about the middle of August until the last of September, and interrupted by only a few changes. It seemed as if a pall had settled over the earth, and the winds were ordered to be still. There was not breeze enough to disturb the exhalations from the earth. There was a feeling of intense heat when exposed to the sun, but that was more tolerable than the confined air of the house. The mean temperature was about 80° F., most propitious for insect life. Dr. Rush, in his treatise on yellow fever, refers to the same absence of breezes, intense heat and general drought during the prevalence of the fever, and seemed to think that its deleterious effects extended to the lower order of animals.

If, as we have reason to believe, infusorial life, animal or insect, not vegetable spores, is the primary cause of yellow fever, we must seek it in its favorite haunts, and classify it so that we may be able to identify it, and study it in order that we may know its habitudes. Where it is indigenous and almost perennial, as in Cuba, would be the proper field for investigation, and a thorough analysis of the air and water of infected districts there would furnish more material and data for arriving at a correct conclusion than can be obtained elsewhere. With a more perfect knowledge of the cause, our views in regard to quarantine would be modified, our commercial interests less disturbed, and the distressing fears and anxieties of our people calmed, and the death-roll diminished.

If the profession were to announce with unanimity that the cause of yellow fever was now existing, but dormant, in all places visited by it last season, and would be quickened into life with the heated term of the next returning season, unless proper sanitary measures were enforced in due time, would the warning be slighted? A similar meteorological season would produce a similar result if our communication with the outer world were to cease to-morrow; but even with the recurrence of a similar season, timely and proper sanitary measures and an observance of the laws of hygiene would

exempt many of those places from a visitation. The topography of some would make proper drainage impossible, yet much might be done to prevent the latent germ from propagating. For a local evil we must resort to local remedies, and, admitting the virtue of quarantine as the best preventive against an exotic evil, we would prove ourselves but poor conservators of the public health and welfare did we ignore a lurking foe in our midst, under a false impression that it could alone assail us by coming over the sea.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I. *Recent Progress in Physiology.** BY HENRY POWER, F. R. C. S.

It is, I think, part of the duty of the president on these occasions to place before the members of the section a brief recapitulation of the advances that have been made in their subject during the year that has elapsed since they last met, and which are either of importance in a scientific point of view, or which have a direct bearing upon practice.

All branches of knowledge have a tendency to become broken up, by a process of subdivision of labor, into a number of subsidiary subjects, each of which is pursued by a band of active workers, who, by the adoption of special methods of research, and still more by the coinage of new terms, become isolated, and, after a time, new and independent centers of inquiry. Physiology is no exception. It is quite within the memory of many of those now present that anatomy and physiology were studied (with great advantage in many points of view) together; but the development that both have undergone from the researches made during the last few years have led to their almost total separation; and the recent action of the University of Oxford in establishing a professorship of physiology, and that of the Council of the College of

* An address delivered at the opening of the Section of Physiology, at the annual meeting of the British Medical Association, in Cork, August, 1879.

Surgeons of England, a very conservative body, in determining that the anatomical and physiological examiners shall henceforth be distinct, together constitute sufficient evidence of the general feeling entertained that these subjects are becoming too wide to permit any one person to be thoroughly familiar with the details of both.

The signs of the disintegration to which I am referrlng are visible on every side. The development of physiological chemistry is attested by the excellent laboratories devoted to this subject and attended by numerous students, that are now attached to almost all the universities, both in Great Britain and on the Continent, and is further demonstrated by the establishment of a new journal, the *Zeitschrift fur Physiologische Chemie*, conducted by Professor Hoppe-Seyler, whose labors in this department of science are well known, and whose valuable text-book on physiological chemistry is now in course of publication. This work, as well as the similar ones of Hofmann and the late Gorup-Besanez, shows to the thoughtful reader that many phenomena, to which the term vital was formerly applied, are simply the result of chemical actions exerted under special conditions.

The improvement in the construction of microscopes, and the comparative cheapness of these instruments, have gradually led to the development of another branch of physiology —histology; a subject that fully merits the attention that has been bestowed upon it, from the light that it throws upon pathological processes, but which, from the very rapidity of the advances which it has made of late years, shows how much still remains to be done in it. It is scarcely more than a few years ago that the section of soft tissues appeared to present insuperable obstacles to the microscopist; but the introduction of chromic acid and bichromate of potash, by effecting a hardening of the tissues, opened up a new and wide field of research; and more recently the employment of glycerine and of solutions of nitrate of silver, of iodized serum, of indigo-carmine, picrocarminate of ammonia, gold chloride, osmic acid, hæmatoxylin, the aniline dyes, and other substances, each having special staining properties of which

advantage is taken by a skillful operator, has afforded much aid in perfecting our knowledge of the structure of the several textures of which the body is composed. The purely mechanical process of cutting the sections to be stained has also been materially aided by the application of freezing mixtures, and by the processes of imbedding in paraffin and in wax, in pith, in carrot, and other materials. Nor are these the only resources at the disposal of the histologist; but he may materially facilitate his work by practicing one or other of the several methods of injection.

By the use of these various means an immense amount of information has been acquired bearing upon the structure and development of the tissues; and I may remark in passing that the most recent outcome of their scientific employment is to be found in the *Atlas of Histology*, now being brought out by Dr. Klein and Mr. Noble, to the former of whom most of the histologists in England have reason to be grateful for instruction and kindly aid in the best methods of histological research. By far the most important applications of these methods are seen in the subjects of embryology and of pathological anatomy, both of which require, in order that they should be successfully prosecuted, much skill and experience.

There still remains one other department of physiology—experimental physiology—which at one time promised to become a noble tree, and to bear good fruit; but this, like Milton, has fallen in evil days on evil tongues, and physiologists have, like him, to mourn that, by the restrictions of humane but shortsighted persons, wisdom is at one entrance quite shut off.

No doubt can be entertained that better and more thorough knowledge of physiology should be possessed by the younger members of the profession than at present prevails. In my opinion, and I have had large opportunities of observation, I think that, considering the time at the disposal of the student, too many anatomical details are required in most examinations, whilst physiological knowledge is held in too light esteem. It has been argued that the study of anatomy is not only essential for the due and safe practice of the pro-

fession, but that it is a very important means of education; that it is the one thing which is properly taught; the one thing that is well known in the preparation for the medical profession. Whilst admitting its value in this respect, and acknowledging the difficulty of drawing any hard and fast line defining what should and should not be known, I can not but think that the candidates for most of our examinations are asked points in anatomy which, when known, are utterly valueless; whilst, if the same time and labor had been bestowed upon physiology, valuable information of a practical nature would have been acquired. Many candidates for our ordinary examinations are able to describe the course and relations of minute branches of nerves and arteries, a knowledge of which they will most probably never have any occasion to apply, or if they have, they will have forgotten them; whilst, in regard to such important practical points as the nature and digestibility of different kinds of food, or the more important phenomena of the functions of circulation and respiration, they can give no intelligible account. It is, indeed, often objected that the whole subject of physiology is in such a state of fusion and transformation, that what is regarded as established on sure and irrefutable grounds one day, is overthrown the next, to be replaced by some equally transitory theory; and the inference drawn is, that it is of little use to learn any physiology at all. The frequent repetition of this by those who should know better, has led to disastrous consequences; and I am convinced that a considerable number of men present themselves for examination who have paid little or no attention either to the lectures or to the demonstrations which are now excellently given at most of the schools, and have done little more than commit to memory the composition of such of the fluids and solids of the body as they think are likely to be asked, and which they, as a result, confuse in a very remarkable manner. At a recent examination at which I was present, three vessels were exhibited to the candidates, of which one contained blood, the second milk, and the third urine. One candidate insisted that the blood was urine, another declared that it was milk. Is this to be attributed to

nervousness, to gross ignorance, or to some dim idea that the examiner is trying to deceive? Whatever explanation may be given, it is obvious that the knowledge of the student should be rendered, by improvement either in the teaching or in the stringency of the examination, more sound and practical.

I shall not attempt to arrange my notices of the principal researches of the past year under the headings above given, but I desire rather to present to you an outline of the more important papers that have appeared in relation to the vascular, digestive, circulatory, nervo-muscular, and generative systems. There are, however, some observations that can not rightly be placed under either of these heads, and they may perhaps be summarily dismissed. I refer in particular to the views of Dr. Klein (*Quarterly Journal of Microscopical Science*, 1878, p. 315; April, 1879) on the structure of cells. Employing special precautions in the preparation of the object, and drawing his conclusions from the effect of various reagents, he finds that cells are composed of a delicate plexus of fibres, the meshes of which contain a juice or plasma. The nucleus possesses a definite membrane, and is again composed essentially of an intranuclear network of fibres and a nuclear juice. The nucleoli he regards as only a condensation of the fibrous plexus. These statements are in the main supported by Frédérique (*Centralblatt fur Medicin. Wissensch.* 1879, p. 164) and by Flemming (*Ibid.*, 1879, p. 401), though both observers are inclined to believe that the nucleoli are separate and distinct bodies. The fibres of the intranuclear plexus seem to penetrate the wall of the nucleus, and to be continuous with those of the intracellular plexus. If Frédérique's observations be correct, the plexus plays an important part by its contractions in the process of cell-division.

In regard to the extensive subject of digestion, at the close of last year and at the commencement of the present, several papers have appeared dealing with the chemical aspect of the different forms of albumen, and the changes they undergo in the digestive process; and the general result which has been arrived at is that the peptones formed from the proteinous

compounds by the gastric and pancreatic fluids are essentially similar, if not absolutely identical, in composition, and are due to the action of a special ferment. The peptones are partly absorbed in the upper part of the intestinal tract, but in part undergo further changes under the influence of a putrefactive ferment, leading to the formation of indol, phenol, and skatol, the appearance of which is associated with the development of bacteria and other low organisms, probably resulting from germs ingested with the food. To the formation of these substances the odor of the fæces is due. The starches have also been submitted to careful examination; and it now appears from the researches of Musculus and Gruby, that under the influence of diastatic ferments, they undergo a series of changes which may be described as successive hydrations and decompositions. At each disintegration, maltose and a new dextrine are formed; the maltose then taking up water, yield grape-sugar. Seegen, however, contends that the final result of such ferments is not grape but "ferment" sugar, characterized by its feebler rotatory and reducing power.

There seems some reason for believing that the salivary glands are more complex in their structure than has hitherto been supposed. In a paper read before the Würzburg Physiological Medical Society, June 15, 1878, and in some beautiful preparations that were exhibited at the College of Surgeons, Mr. Bermann showed that, by particular staining processes, appearances were presented indicating the existence of three separate glands in the submaxillary gland of the mouse, bat, dog, and cat—namely, a pure acinous gland, a compound tubular gland, and a peculiarly constructed tubular gland. This is interesting, as it will be remembered that, in the non-venomous snakes, two forms of glands are found in the salivary region, one of which developes into the venom-gland of the poisonous snakes.

The long disputed question of the nature of the acid in the gastric juice seems, from the experiments of Richet, as well as those of Heidenhain (Pflüger's *Archiv*, Band xix., 1879, p. 148), to be settled finally in favor of the view originally

advanced by Dr. Prout of its being hydrochloric acid. If butyric acid be present, as it sometimes is, it is due to the decomposition of the constituents of the food. The intestinal fluid, or "succus entericus," is found by Demant, in opposition to many former inquirers, to contain only an amylotic ferment, and hence has not any action on albumnes or fats, unless the latter contain some free acid.

The most interesting observations that have been made upon the blood are those which bear upon its globular richness, a subject which has important practical bearings; for there can be no doubt that the most essential properties of the blood in respiration and in nutrition depend on the number and quality of its morphological elements. The chief results that have been obtained are that the number of the red corpuscles, is from four to five millions in a cubic millimètre, with about six thousand white corpuscles, the proportion between the two being seven hundred red to one white (Dubrisay, *Gaz. Med.*, 1878, No. 15). The absolute number of red corpuscles is greater in men than in woman, and greater in adult life than in infancy or in old age. It increases after food (Cutler and Bradford, Foster's *Journal of Physiology*, vol. i., p. 428). The proportion increases relatively to the mass of the blood in all conditions that lead to escape of the watery parts, as after diarrhœa, during fasting, in cholera, etc., and in the cutaneous veins as opposed to the arteries. The number of red corpuscles diminishes remarkably during hybernation. Their mode of origin is still a subject of discussion; and the spleen and ductless glands, the liver, the muscles, and the cancellous tissue of bones, have all been called upon to furnish their contingent. Quite recently, Hayem (*Centralblatt fur die Med. Wiss.*, 1879) has described small, peculiar corpuscles, which he names hæmatoblasts, that are, he believes, always formed in the blood, and become converted into red corpuscles. It seems to be fairly deducible from the experiments of Hufner, that the amount of oxygen theoretically taken up by one gramme of hæmoglobin is so actually; and that at 0° and one inch pressure, 1.27 cubic centimetres of oxygen are absorbed by one gramme of hæmoglobin.

It is unnecessary that I should do more than just refer to the very remarkable observations of Dr. R. Norris, that the blood contains a hitherto unrecognized corpuscular element, as you will shortly have an opportunity of hearing the statements and seeing the preparations and photographs made by Dr. Norris himself.

Nor can I do more than allude to the elaborate experiments of Marey, Bowditch, Hildebrand and Heidenhain, on the electrical excitability of the heart, which, however, collectively demonstrate that, during the systole of the ventricle, a refractory period exists when the heart will not respond to such a stimulus.

Much interest attaches to the observations of Stricker and Wagner, showing that nerve-fibres accelerating the action of the heart are contained in the cervical region of the spinal cord, and pass into the sympathetic cord, being more numerous and effective on the right side. The researches of Ludwig show that the ganglion-cells of the heart are paralyzed on exposure to a high temperature, but again become active when the temperature is reduced. The inhibitory fibres and ganglia resist a high temperature better than the motor ganglia.

An important addition to our knowledge of the dynamics of the circulation is gained as a result of the remarkable experiments of F. Goltz and J. Gaule (Pflüger's *Archiv*, Band xvii, and *Centralblatt fur Chir.*, 1879), who have shown that a very strong suction-power is exerted by the left ventricle, the right ventricle and right auricle, quite apart from, and independently of, the respiratory acts, since it was observed after the chest had been opened. It is proportionate to some extent to the thickness of the walls of these cavities, and probably constitutes an important factor in the movement of the blood in the veins.

Ranvier and Peremeschko (*Centralblatt fur die Med. Wiss.*, 1879) find that the smaller arteries, veins and capillaries of muscular and other contracted tissues present varicose dilatations, which is in interesting relation with the observations of Gaskell (*Journal of Physiology*, i.) on the increased flow of blood through muscles during contraction; though Gaskell

explains this increased flow by supposing that the motor nerve of a muscle contains not only fibres that cause the muscle to contract, but vaso-dilator fibres, which, by enlarging the calibre of the vessels, permit a freer passage of blood.

In regard to respiration, Dr. Martin, who has left Cambridge to commence what all who know him hope will prove a prosperous career as the Professor of Biology in the Johns-Hopkins University, Baltimore, has, in conjunction with Dr. Booker, made an extensive series of experiments to determine the position of the respiratory centers in the mammal. These experimenters sum up (Foster's *Journal of Physiology*, vol. i, 1878–9) the results of these observations in the following statement: "There lies deep in the mid-brain of the rabbit, beneath the posterior corpora quadrigemina and close to the iter, a respiration-regulating center, similar to that in the corpora bigemina of the frog; electrical stimulation of this center causes accelerated inspiration, finally passing into tetanic fixation of the chest in an inspiratory condition, and correspondingly diminishes, or altogether inhibits, expiration."

The question whether the respiratory movements are excited in consequence of the stimulus of an excess of carbonic acid in the blood, or in the air contained in the pulmonary cells (Traube, Thiry Dohmen), or whether they are due to a deficiency of oxygen, as maintained by Rosenthal, has not been satisfactorily settled. It is certain that an excess of carbonic acid gas in the air breathed causes the absorption of less oxygen (C. Bernard, *Lecons sur les Effets des Subst. Toxiques*). Hermann is inclined to think that the presence of carbonic acid causes the medulla to liberate respiratory movements, while deficiency of oxygen causes an increase in the excitability of the nervous system, which hence responds to the presence of smaller quantities of carbonic acid gas. The recent experiments of Friedländer and Herter (*Zeits. fur Phys. Chem.*, Band iii, 1879) seem to show that both deficiency of oxygen and excess of carbonic acid gas cause dysnœa, increase of blood-pressure and diminution in the amount of oxygen absorbed. Carbonic acid poisoning is,

however, characterized by a diminution in the amount of carbonic acid eliminated from the system, and by the rapid paralysis of the motor and sensory nerve-centers; while, on the other hand, a deficiency of oxygen is peculiar in causing violent convulsions shortly before death.

Voit, whose observations on respiration are quoted in every physiological work, has continued his researches on this subject (*Zeits. fur Biologie*, B. xiv); and, among other conclusions, has been led to throw some doubt on the statement formerly made by Pettenkofer and himself in regard to the storing up of oxygen during sleep; for, on revising the details of the experiment, he finds that sufficient care was not taken to determine the quantity of watery vapor contained in the bedclothes covering the sleeper. A repetition with improved apparatus, of his former experiments on the effects of variation in the number of respiratory acts on the composition of the respired air, substantiated the fact that, with more frequently performed respiratory acts, the excretion of carbonic acid diminishes. He also finds that, in hybernating animals, the gas exchange is extraordinarily small, only forty-four per cent. of the oxygen absorbed reappearing in the form of carbonic acid gas. Nevertheless, though no food was consumed, there was an increase in the body-weight. It is interesting to Englishmen, who live in all parts of the world, and is certainly in accordance with their experience, to know that the influence of climate on the general metabolism of the body is comparatively small.

There are many minor papers on the action of the nerves in respiration. One of the most valuable is that of Langendorff (*Centralblatt fur die Med. Wiss.*, 1879, p. 377), who finds that mechanical stimulation of the proximal extremity of the divided vagus is followed by an extraordinary prolongation of the pause; electrical stimulation caused arrest of the respiratory acts as often in expiration as in inspiration. The results of stimulation with chemical agents have led him to admit expiratory or inhibitory, and inspiratory or accelerating fibers in the vagus.

The structure of the nerves has been investigated by Boll

and described in a paper, an abtract of which has been made by Dr. Klein. His main result is that the axis-cylinder is liquid, and is certainly destitute of any fibrillar structure. It is contained in a special sheath. The medullary sheath is interrupted at each Ranvier's node, and is homogeneous. The sheath of Schwann is a closed tube without solution of continuity, but it is thickened at the nodes of Ranvier.

An important observation, if corroborated by subsequent inquirers, has been made by Ludwig Lowe, showing that, on staining the embryos of rabbits with carmine in the ordinary way, the nerves destined to perform motor functions are more deeply stained than those which are endowed with sensory properties; and he is thus enabled to determine the position of the fasciculi of these fibers in any nerve. He finds that, after the junction of the anterior and posterior roots just beyond the ganglion, a marked difference exists between the primary dorsal and ventral branches. In the dorsal branch, the sensory fibers are collected into a fasciculus lying throughout its whole course on the inner side of the motor fibers, whilst in the ventral branches the position of the two is reversed, and the sensory fibers are on the outside. The branch which connects the ganglia of the sympathetic nerve with the anterior division of the spinal nerves is exclusively sensory.

In regard to the physiology of the central nervous system, Meynert (*Rundschau*, April, 1879, p. 288, and *Centralblatt*, 6, 1878) has advanced some interesting speculations upon the relative functional importance of the cells of the brain and the intercellular substance, or neuroglia. The gray substance is granular, and contains, in addition to the nerve-cells, two elements—the glia-cells or brush-cells, and the glia nuclei; but none of these are directly connected with the granular gray substance, which he thinks has for its function merely the separation and isolation of the cells and fibers proceeding from them, before these last have acquired their medullary sheath. He points out that the nerve-cells are primarily and independently developed, whilst the neuroglia proceeds from confluent connective tissue-cells of the embryo. The nerve-fibers in part proceed from protoplasmic processes of the cell-

substance, and in part from fusiform cells developed in the medullary substance with which they join.

The electrical relations of nerve and muscle have been a fruitful source of discussion among physiologists, but Hermann's investigations, which have been excellently summed up by himself in a lecture translated in *Nature* for April 17, 1879, and also by Dr. Burdon Sanderson in Foster's *Journal of Physiology*, have swept away a large amount of hypothesis, and have shown that the electrical currents observed in muscle are essentially due to the arrest of oxidizing processes in dead or exposed muscle, and to the continuance of oxidizing processes in living muscle.

Grützrer (Pflüger's *Archiv*, 1878, p. 250) has suggested an important modification of the view generally accepted since the time of Dubois Reymond, that stimuli, especially electrical currents of uniform intensity, do not act as stimuli to nerves; for he finds that heat and the constant current, apart from the shock caused by making and breaking contact, excite centripetal and those centrifugal nerves which effect dilatation of the blood vessels, but fail to act upon motor or secreto-motor fibers. In connection with this, the observations of Kroneeker and Stirling on the genesis of tetanus may be referred to. These observers find that the white and red muscles of rabbits (*Centralblatt*, 1879, p. 70) respond differently to electrical excitation; the red muscles being rendered incompletely tetanic with four shocks per second, and completely tetanic with ten shocks; while the white muscles require thirty shocks per second to throw them into tetanus.

In regard to the localization of the functions of the brain, a question which has attracted much attention of late years, owing to the suggestive experiments of Hitzig, Ferrier, and others, a valuable paper has been contributed to a late number of Pflüger's *Archiv* by Professor Goltz, in which he defends the method of investigation he has pursued—that, namely, of cutting away large portions of the periphery of the brain, and by careful subsequent attention to the well-being of the animal effecting recovery: a method that has been treated somewhat lightly by Hitzig. In several cases Goltz cut away as

much as a drachm from the brain of dogs, and found that the animals retained all their faculties, though in a more or less dulled and blunted condition. Their intelligence, he thinks, is weakened, not lost; their vision and hearing are enfeebled; their tactile sense impaired; their muscular sense rendered imperfect. Still, however, they retain a large amount of intellectual power. They can move about, perceive the contact of external objects, and masticate their food. Hence Goltz arrives at the conclusion that all parts of the cortex of the brain are of nearly equivalent value, though he admits that removal of the frontal lobes induces greater and more persistent impairment of sensation than removal of the cortex of the posterior lobes, whilst ablation of a drachm of the posterior lobes occasions more persistent impairment of vision. Practically, he thinks that the brain is an integral part of the body, and works as a whole; each part of the cortex of the cerebrum participating in all the functions that are included under the terms, will, sensation, ideation, and thought. Each segment, moreover, independently of the rest, is connected with every voluntary muscle, and is also connected with all the sensory nerves of the body. This view, of course, stands in direct opposition to that advocated by Hitzig and Ferrier, who maintain that each faculty resides in a definite portion of the brain.

Other observers, as Marchand (Pflüger's *Archiv*, 1878, p. 511), and Luciani and Tamburini (*Centralblatt fur die Med. Wiss.*, 1879, p. 171) have worked at the same subject; and Gower has published an interesting case of congenital absence of one hand, in which he found that the brain presented a remarkable difference in the development of the two posterior central convolutions of the opposite side, though its microscopic characters were normal.

Had a little more time been at my disposal, I should have liked to refer at some length to the various observations of Dastre and Morat upon the influence of section and stimulation of vaso-motor nerves, which have led to rather unexpected results; but I must pass on to the consideration of that branch of physiology to which the attention of many excellent ob-

servers is now turned, and which is consequently making rapid progress, viz., embryology, and none surely requires more patience in its pursuit or greater skill. The material is difficult to obtain in a fresh condition; the processes of hardening require to be conducted with extreme delicacy; and a sharp knife, a steady hand, and much practice are required to obtain good sections. The most important work done lately in this direction is the monograph by Mr. Balfour on the elasmobranch fishes, which are interesting in every point of view, but chiefly as supporting the views of Haeckel and the advanced transcendentalists, and showing that the process of development presents comparatively slight modifications throughout the whole of the vertebrata.

I must not, even in this brief resumé, omit to mention the numerous memoirs and papers of Mr. Parker, which, though somewhat outside of ordinary medical knowledge, yet possess singular interest on their own account; for they show that, in regard to the osseous system of the vertebrata, to which his attention has been especially directed, a common type is traceable throughout; and that, although particular parts may, like the Gin of the *Arabian Nights*, enlarge to a portentious size or contract to microscopic dimensions, the same parts are always present, ready to undergo and take their share in the modifications of other organs required for the well-being of the animal.

Whitman's careful researches (*Quarterly Journal of Microscopical Science*, 1878, pp. 245, 283, 109) on the embryology of Clepsine, an animal closely allied to the leach, deserve notice for the light they throw upon the history of the germinal vesicle, clearly demonstrating that this body does not, as was formerly imagined and is still maintained by some, entirely disappear before cleavage begins, but that it, or rather a part of it, remains as a nuclear element, probably playing an important part in the development of the ovum.

Dr. Milnes Marshall, in an excellent paper read before the Royal Society, has traced the development of the olfactory nerve and organ in Vertebrata, and finds that the olfactory nerve appears as a solid mass of cells at a very early period of

development, projecting from the upper part of the forebrain before any traces of the hemisphere can be discovered. The olfactory lobe is formed at a later period, as a depression of the inner wall of the vesicle of the forebrain, and the nerve then shifts to a lower position.

And now I can not but feel that, in the observations I have here had the opportunity of making, I have only alluded to a few of the principal papers in each great department of physiology; but any one who will take the trouble to look at the appendix to the first volume of Foster's *Journal of Physiology* will see that it would be impossible in the short time at my disposal to name even the papers and memoirs that have been published during the last year, since the headings alone take up sixty pages. I have, however, I trust, said enough to show that physiology is not dead, but living, and that, as a science, it is making rapid progress.

It is satisfactory to everyone who has the interests of physiology at heart, to feel that, in the establishment of such a center as this, the ancient reputation of Ireland for learning is well sustained, and that it is under the direction of a man so able, cultivated, and energetic as Professor Charles. He has, with rare judgment and tact, acquired an excellent collection of instruments, the use of some of which he is about to demonstrate to the members of the Association. The results of the work he will accomplish with them will, I hope, appear in papers read at future meetings of this Association.

I must now conclude by thanking you for the patience with which you have listened to what, I fear, is a somewhat disconnected account of the advances that have been made during the past year in physiology. The list of papers to be read and demonstrations to be given, relate to very interesting subjects, and we will now, if you please, lose no time in commencing their consideration.—*Brit. Med. Journal.*

Hypodermic Injection of Aloin as a Purgative.—Fronmuller uses a solution of one part in twenty-five of very warm water, which produces an evacuation in six to fourteen hours; rarely in two to three.—*Med. Times.*

ART. II. *Mushroom or Toadstool Poisoning.* By JULIUS A. PALMER, JR., Boston, Mass.

The terms fungus, mushroom and toadstool poison are synonymously used by mycologists. The three words may be so understood in this article. Mushrooms may poison the human system in three ways, as follows:

1. They may simply disagree with the organs of digestion, as in the case of the hard, tough varieties of fungi, or in the case of the common mushroom, which, in a partly decomposed state, often generates hydrogen gas in such quantity as to produce nausea and vomiting.

2. They may be slimy, acrid or nauseous. Many mild *Boleti* are too slimy for food. The *Russulæ* have very acrid varieties. *Polyporus squamosus* and others are bitter, and taste of leaves and grass.

3. They may contain a subtle alkaloid without taste, smell or other indication of its presence, as in the group known as the *Amanitas.*

The symptoms of poisoning by indigestion are soon manifest, and need occasion no alarm. Relief comes in the natural channels; it may be hastened by emetics, by warm water, or by plunging the finger into the throat.

The effects of poisoning by some nauseous or acrid elements are immediate, and present nothing to discourage physician or patient. Expulsion through the mouth or alvine canal, followed by emollients of sweet oil, slippery elm or gum arabic, will soon allay the irritation.

It is probable that most of the fatal cases of poisoning by toadstools are due to amanitine. Physicians have in all ages confessed their utter inability to find an antidote for this poison. An eminent chemist stated to me that he should regret to receive for test purposes the stomach of any one so poisoned, as he should not know where to turn for a re-agent. This fungus being eaten has no burning or unusual taste. It passes harmlessly through the stomach mixed with the other food. From eight to fifteen hours after ingestion, dizziness, nausea and purging begin, followed by fainting, delirium and death.

The foregoing classification is of great importance to medical men. Persons eating noxious mushrooms are, by that very fact, unable to identify the species that caused their sickness. Amateurs will often select six toadstools and class them as one kind. Let the physician inquire carefully how much time has passed between the suspected meal and the attack. The shorter this elapsed time, the more hope for success by appropriate treatment. Poisoning by amanitine being the most common and most fatal, to this part of our subject shall the rest of this article be devoted. We shall cite three cases.

Two persons at Sautry, near Corbeil, France, made a meal from the *Amanita bulbosa*, under which head the French include our *Amanita vernus*, *phalloides* and *mappa*, as but slight variations divide these three members of the group. Beyond vertigo in one case, no ill effects were felt until three and eight, respectively, of the morning following. One patient even slept calmly after the vertigo passed away. Once attacked, however, the usual symptoms followed, and inside of three days both were dead. Space forbids an enumeration of their symptoms. Briefly, from attack to post-mortem appearances, these were little different from those of cholera Asiaticum.

The physician understood the case, yet after the consecutive use of coffee, tea, antimony, ether, whites of eggs, anti-vomitives, laudanum, milk, leeches, ice and emollient fomentations, he says: "None of the remedies were followed by the least sign of amelioration." He afterward excepts (as simple alleviatives) ice internally, and emollients applied externally to the abdomen.

A report of a more recent case, kindly furnished me by the consulting physician, is the second now before me. Any medical man would be struck by their perfect identity. Patients, attendants and physicians seem to have assumed parallel parts in an equally sad drama. Four persons were poisoned in this case, of which number three died. The survivor's letter to me merits publication, and has been admired for its simplicity and clearness by many medical men. The

fatal meal was eaten at four o'clock in the afternoon of Monday, October 2, 1876. About midnight all were attacked who had partaken of it. The first death took place on Thursday following, at ten A. M. The second of the three on the next day, or Friday morning. The one who recovered experienced nothing but a severe diarrhœa. Her exemption and the latest of the three deaths will be the subject of future paragraphs.

The third and still more recent case is identical with the others. Details are, however, not at my command. Two of the patients were children, and died in thirty-six hours. One, the father, was subject to severe delirium, jumping from a second-story window. The attack came on about eight hours after ingestion. All these cases are alike in that up to the actual attack no person felt the worse for the fatal meal.

Mushrooms make the same use of the atmosphere as men; even their exhalations are, accordingly, air vitiated with their properties.

About four years ago a number of poisonous mushrooms (not amanitas, but of a totally different family) were sent me with edible fungus. The two varieties had lain twelve hours in the same box. The noxious ones were rejected, the esculent washed and eaten. In a moment my appetite was gone. Violent perspiration, vertigo and trembling were the next symptoms; then chills, nausea, purging and tenesmus, all within thirty minutes. Now, the substance could not have reached the bowels. The virus, absorbed from the noxious fungus, permeated the whole system through eating the harmless ones; unmixed with other food, it acted on the muscles through an empty stomach. Once spent, the attack passed off, and the substance, from which the system had absorbed all the venom, was digested without exciting undue motion when it reached the bowels. Probably this result was also due to the use of olive oil as a remedy.

Again, absorption may take place through the pores of the skin. An amanita held in the closed hand will produce all the symptoms of poisoning, even to convulsions. Once,

while perspiring from a long walk, I undertook to bring in a bunch of these mushrooms for an artist. Seated by them in a closed car, holding them in my warm hand, although protected by a paper wrapper, a fearful nausea came over me. The toadstool was not at first suspected, yet I had all the symptoms of a sea-sick person, and was only relieved by a wide distance between myself and the exciting cause.

While writing this article a friend sent me two very elegant specimens of the amanita tribe. They were in a confined box. On opening it I smelt of them a few times, and allowed the box to lie near my desk while I wrote to a medical gentleman anxious to procure such for chemical experiment. Having sent them away, the matter was dismissed from my mind until three hours after, when an attack of vomiting and oppression at the stomach enforced it upon my attention. The whites of my eyes became livid, and even to noon the day following the leaden color of my face was noticed by more than one person.

One more example and we will draw the corollary, and speak of remedial measures. This time I chewed a piece of amanita the size of a half dime, ejecting the substance but swallowing a little of the saliva. Constriction of the muscles of the throat was the first symptom. One attack of vertigo followed, but it was momentary. Disgust with customary employment, like that felt in sea-sickness, was the most constant sign of the presence of the poison. Seventeen hours after swallowing it, I, for the first time, could have vomited, and felt a slight straining and tenesmus, after which the effects passed quickly away.

From these personal experiments the following conclusions may be drawn: The poisonous principle of fungus being absorbed by a harmless element, if the latter be eaten, the venom acts more quickly and surely. Additional proof of this assertion exists in the fact that if the amanita be cut in sections and laid in vinegar, the fungus may then be eaten without danger to life, but on a very small dose of vinegar, death will follow more speedily than if the whole toadstool be eaten. One stage in the process of absorption has been

completed. This last conclusion admits of one exception. In the second case of poisoning cited herein, a single member of the family escaped death. She put vinegar on the toadstool in her plate before mastication. The alkaloid was neutralized thereby, or at least fused with acid strong enough to occasion no harm excepting unusual action of the bowels.

But, after ingestion, any administration of remedies calculated to precipitate the alkaloid, or to amalgamate it with the gastric juices, only helps absorption and lessens the patient's chance of expelling it before his digestion has extracted all its venom. A dog poisoned with amanitine received vinegar as an antidote; his symptoms were all fearfully aggravated and great distress ensued. The presence of the assimilating agent simply aided the system in absorbing the virus. Sweet oil was given, then he vomited the fungus mixed with whitish mucus, and, on a milk diet, he recovered.

Again, the inflammation, cramps, colic and straining at stool, do not cause the death of the patient, but are simply secondary effects of the poison absorbed. A few drops of amanitine injected up the back of a frog will produce death in less than an hour, without leaving on the body the slightest indication of inflammation. My most violent personal experience with this poison was when I was inoculated through the mucous membrane by the sense of smell alone. The oppression in the stomach and abdomen was very severe, yet not a piece of poisonous fungus lay in the intestines.

The poison by chewing a small piece shows how little may endanger human life, and further, that the operation through the digestive functions is so slow that any member of the amanita family should be tested with great care as esculents.

In speaking of the remedial measures it will be well to bear in mind that these remarks apply to the amanitas alone, the presence of which can be inferred by the physician, wherever the attack commences at eight hours or over after eating the mushrooms. Whatever the remedies used, they must be introduced into the system as directly as the physician's judgement may deem possible. The writer of this article is not a medical man, and he does not propose to dic-

tate to those who have given drugs and their effects, the human frame and its wonderful network, their attention for many years.

Yet subcutaneous injections and enemata possess the most important qualifications for reaching poison by fungi. Two drugs may be suggested for hypodermic injection: tobacco and atropine or belladonna.

The throbbing heart of a frog is silenced by a drop of muscarine, or Schmiedeberg's alkaloid from *Amanita muscarius*. Action is restored by a drop of atropine. Animals that have been hypodermically injected with atropine are unharmed by a fatal dose of muscarine. Contrariwise, patients have eaten amanitas, and by means of emetics and purgatives every trace of the fungus has been removed. Stimulants and alleviatives have apparently built up the system; sixty hours after, præcordial distress, faintness, coldness of extremities and other symptoms have been manifest, proving that in rejecting the fungus the system had not discharged itself of the poison. By most mycologists either emetics or cathartics are considered wore than useless in poisoning caused by amanitine. Injections of warm water, soap and water, perhaps mixed with oil of sweet almonds or oil of olives, on the contrary, relieve the tenesmus, and, by producing motion in the lower intestines, much assist the bowels in expelling the foreign substance in a natural manner. Then the physician should use subcutaneous injections of atropine (which seems to control this most powerful of known poisons), or such other drug as the symptoms may indicate or his discretion dictates.

Perhaps this article would be incomplete without a description of the leading traits of the amanita family of mushrooms. These are, first, a volva or wrapper, which incloses the young plant before it leaves the soil, and may be found at the base of the stem of the full-grown mushroom. The remains of this volva also appear on the cap or pileus, in the form of irregularly scattered and sub-persistent warts or scurf, easily rubbed off, leaving the skin intact. The gills underneath the cap are pure white, and if the mushroom

laid on blue paper a few hours, the white deposit of the spores will resemble delicate shading with an artist's pencil. The color of the mushroom is very variable, red, orange, green, yellow, white, with intermediate shades. The most common to this latitude is pure white or yellowish-white cap and otherwise pure white. There are several kinds which may be safely eaten, but it is far better for an amateur to avoid the whole group. The dangerous varieties are extremely common.

We make daily use on our table of a great many varieties of mushrooms for food, gathering them fresh in summer and drying the superfluous stock for winter use. Personal experiments prove that this constant use develops an extreme sensitiveness to the toxicological properties of fungi; the system does not become hardened to their noxious elements. Contrariwise, it repels them and is repelled by them in quantities which a stranger to such diet would not notice. Because a mushroom is eaten with impunity by the lower animals, it by no means follows that it is fit for the food of man. In the case of October, 1876, mentioned herein, the amanitas were fed to the pigs, who ate the whole stew without ill effects. Swine are also proof againt the noxious properties of *Amanita muscarius*, and rabbits will swallow unharmed some other non-esculent fungi. On the other hand, *Agaricus melleus* is said to have killed a dog in twelve hours, and a cat to have died in terrible convulsions from a meal of *Marasmius oreades*. I have seen a dog very sick from biting off the tops of the *coprinus comatus*; all these are edible mushrooms. —*Moniteur Scientifique.—Med. and Surg. Reporter.*

ABSTRACT DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."

CONDUCTED BY EDWARD MILLER, M. D., LOUISVILLE, KY.

THE TREATMENT OF HEMORRHOIDS. By F. P. ATKINSON, M. D.—So much has been written lately about the operative treatment of hemorrhoids, that the use of topical applications has been neglected. Of course, whilst the cause remains,

femoral artery in Scarpa's triangle is employed for several hours if necessary. In these cases of Mr. Hutchinson, the patients left their beds in a fortnight's time, and the cure was sound and permanent. There are very few cases of aneurism that can not be cured by digital compression if properly and intelligently applied; and presuming that compression be anatomically possible, and it is highly probable that that mode of treatment is much assisted by the preliminary proceedure above indicated. Digital compression certainly requires a staff of good assistants, and is irksome to the patient, but it is nothing more than irksome; it is a simple and safe mode of cure, and should always have a thorough trial before any more serious procedure is entertained.—*The Lancet.*

Treatment of Fracture of the Clavicle. By D. Hayes Agnew, M. D., LL. D.—Fracture of the clavicle is usually produced by a fall or blow on the anterior part of the shoulder, and generally occurs at the summit of the angle, and is more frequent near the sternal than near the acromial end. This fracture is one of the most difficult to treat without some resulting deformity. That the parts may be maintained in perfect apposition, the patient must be kept flat on his back with the hands crossed on the chest, and with the head just a little elevated. In this position the scapula is immovable, and if the scapula could be permanently fixed, the problem of the treatment in this fracture would be solved. It is impossible, however, to treat this fracture by position alone, unless—what can not always be done—a nurse be secured to keep watch all the time, day and night, and so forestall the slightest tendency to move on the part of the patient. Thus far no apparatus has been invented which can do the work properly, and Dr. Agnew usually treats the fracture by keeping the patient in the position described above for the first few days, unless restlessness comes on; for, if the bones can be held in place for a few days, they will have lost, to a large extent, their disposition to get out of position, and their ends will have become imbedded in plastic matter, and will have had time to become rounded off.

digestion must be avoided, and a less amount of food must be taken at meals. As a rule, absolute strictness of diet is more necessary in dyspepsia from defective secretion, than in dyspepsia from impaired motion of the stomach, as in the latter, digestion is sluggish rather than imperfect. One dietetic rule is however of the greatest importance. The principal meal should be taken early in the day, before the nervous system has been exhausted, either by mental or bodily exertion. In some instances the power of digestion seems to diminish as the day advances. From its well-known power of exciting muscular contraction, strychnia suggests itself as the remedy for impaired gastric functions. Dr. Leaved thinks he is entitled to some credit for having helped to make known its value. In 1860 he wrote: "Speaking from extensive experience, I know no single medicine of more value. It acts by increasing the tone of the muscular coats of the stomach and intestines. When the coats are relaxed, gases are generated, mainly owing to the retardation of the aliment in the cavities." Some authorities using it without discrimination, have condemned the use of strychnia in these affections. The secret of its successful administration lies in the recognition of the cases. It is suited for cases characterized by the symptoms of impaired motion, namely, uneasiness, but not actual pain after food, and flatulence. It is not suited for cases of impaired secretion, characterized by pain after food and little or no flatulency. It should never be given in pills, and the dose of one twentieth of a grain should rarely be exceeded. Dr. Leaved, who has used it thousands of times, never knew harm to result. Electricity is useless in these cases. To check flatulence from fermentation, carbolic acid, or what is less unpleasant, thymol may be used with success. When from temporary paralysis, due to over-distension, the stomach is unable to expel the flatus, carminatives are given, and when these fail, charcoal, from its remarkable power of absorbing gases, proves useful. Dr. Leaved gives charcoal from vegetable ivory in gelatine capsules. There are cases, however, where the stomach affection is secondary to diseases of the liver or kidneys, in which the muscular paralysis is so

complete as to demand mechanical interference. For this purpose a small India-rubber tube, two feet long, perforated like a drainage tube for four inches from its closed end, is easily introduced into the stomach, and proves effectual in relieving the distended organ.—*British Med. Jour.*

On the Treatment of Fistulæ and Scars of the Cheek. By Edward Bellamy, F. R. C. S.—The directory for the treatment of salivary fistulæ, are given in the usual surgical text-books, but the other fistulary perforations of the cheek are generally dismissed into the category of cases curable on "general principles." Dr. Bellamy believes that most, if not all, of these cases may be cured with their resulting cicatrices without leaving any observable trace, a matter of importance in the female. To find out the course of the fistula, sometimes a matter of difficulty, the following classification is of value in diagnosis: 1. Those opening into the cheek, with a track above the level of the buccal or labral mucous-membrane, and which usually discharge saliva only. 2. Those whose track lies below this level, and which discharge pus and muco-purulent fluid and no saliva. 3. A complication of both forms, and which discharge both pus and saliva. To find the accurate direction of their course, a fine filiform bougie, or better still, a fine India-rubber French bougie, is more useful than anything else. After having determined the course, irritating cause and condition of the fistula, in order to avoid further scars, the dead bone, if there be any, is to be removed by bone forceps or gouge, and afterward the tracts washed out with a strong solution of sulphuric acid, which has the effect of completely destroying the fistulous track; or by the introduction of minute crystals of nitrate of silver until granulations appear at the orifice. An unsightly cicatrix, however, is sure to remain, appearing as a "pucker" or adhesion to the underlying bone. Dr. Bellamy gives two methods of treatment for this condition, dependent on the extent or strength of these adhesions. The first consists in introducing a fine blunt-pointed tenotome through the tissue of the cicatrix—laminating, as it were—and next to introduce between

the split surfaces a thin strip of sheet lead, which should be kept in to prevent the adhesion of the surfaces divided by the tenotome. After a few days the superficial lamina of the cicatrix may be subjected to gentle movement over the lower lamina, which the patient may do himself; this prevents adhesion, renders the tissue pliant and assimilative, and may be called the "passive movement" of the cicatrix. The second plan consists in dissecting away the adherent tissue entirely, vivifying the edges of the cicatrix and bringing them together by means of fine entomological pins, and so gaining a mere linear scar at worst, care being taken, by movement, to prevent permanent adhesion. Manipulative skill is necessary for success, but the results are so satisfactory, that Dr. Bellamy thinks operative proceedings should be undertaken where the patient's looks are a matter of importance.—*The Lancet.*

The Treatment of Popliteal Aneurism. By Mr. Jonathan Hutchinson.—Mr. Hutchinson has lately treated three cases of popliteal aneurism successfully in the following manner: 1. The patient was kept in bed in a state of absolute rest. 2. His diet was limited as far as possible to solid food, a minimum of liquids only being allowed. 3. Iodide of potassium was administered. The perfect rest decreases the arterial tension of the part, and prevents the aneurismal sac from being exposed to varying degrees of pressure. A solid diet increases the fibrin of the blood, and so prepares the patient for the final cure. The iodide of potassium theoretically aids in the same process, that is, in increasing the blood fibrin. This is the preparatory treatment, and is continued for two weeks or more. Usually under this treatment the tumor ceases to grow, and sometimes diminishes in size. At the end of the preparatory treatment, the patient is anæsthetized and Esmarch's elastic bandage and rubber band are applied to the limb. After the removal of the bandage, the band is kept on for one hour, the patient being still under the influence of chloroform. The limb is carefully watched, and undue loss of temperature prevented. On the removal of the band, if the tumor still pulsates, digital compression of the

the benefit derived from local treatment is but partial and temporary. Dr. Atkinson endeavors to supply this neglect, and for the purpose of treatment, divides hemorrhoids into three classes, viz.: Acute, sub-acute, and chronic. In the acute stage they are inflamed, of a dark red appearance, and give rise to a throbbing, burning pain. Mr. Biddle, a fellow practitioner, tells Dr. Atkinson that in this stage the effect of calomel-dusting is something wonderful. He considers that it acts upon the liver and at the same time as a local sedative. Sponging with hot water is also beneficial. In the sub-acute stage the feeling complained of is more that of weight and tension, though in going to stool the pain is often very acute. To relieve this condition, the compound gall ointment or a solution of acetate of lead and opium should be freely used, and enemas of cold water. In the chronic stage the best application is the common pitch ointment. Mr. Corbett first tried this, and he got the hint from an old nurse, by seeing her apply some tarred rope. Dr. Atkinson says he can not speak too strongly with regard to the effects of this ointment. Operative measures may often be prevented by its timely use, and it should be tried by every one when the compound gall ointment is ineffectual. The astringent effect of the pitch ointment is something remarkable, and there is nothing which acts so quickly and effectually. The general treatment has to be directed toward altering the particular mode of living which has brought about the abnormal condition. Luxurious and sedentary habits, hard riding, venereal excesses, and aloetic purgatives should be forbidden. The medical treatment aims to keep the bowels freely relieved, and to lessen portal congestion. Confection of senna is a useful and a not unpleasant aperient in these cases; Dr. Atkinson, however, would prefer the use of an euonymin pill occasionally at night, with a dose of effervescing Carlsbad salts in the morning, as these have a direct effect upon the portal circulation. —*The Practitioner.*

THE TREATMENT OF DYSPEPSIA. By A. LEAVED, M. D.— Dr. Leaved says that diet claims a prominent place in the treatment of all forms of dyspepsia. Those articles slow of

At the end of this time a permanent apparatus is applied in the following manner: An axillary pad, wedge-shaped, and about five inches long by four inches wide, and tapering rapidly to a point, is introduced, which accomplishes two things, viz., (1) elevates the arm, and (2) holds the shoulder up. Two strips of adhesive plaster, three and a half inches wide and long enough to pass entirely around the body, and form a loop besides to slip over the arm. The first strip is so applied as to carry the arm inward, and, while thus bringing the elbow to the side—the wedge-shaped pad acting as a fulcrum—it will pry out the acromial end of the fragment. The second strip, with a small opening in the middle for the olecranon, after being placed over the latter process of bone, is carried to the opposite shoulder and the ends curved so as to keep the arm outward and backward. In women it is sometimes better to carry both bands below the breast. If the dressing has to be renewed, it is better to put a new one on top of the old one rather than to run the risk of taking the first one off.—*Hosp. Gazette.*

Treatment after Amputation, Especially where Suppuration of the Flaps has Occurred. By H. L. Getz, M. D.—Dr. Getz was called on to attend a case where amputation of the middle third of the leg had been performed, and found the patient given up by the attending surgeon, with the entire limb, up to the hip, enormously swollen and erysipelatous; the wound gaping and showing no signs of healing. The sutures and dressing being removed under the local use of carbolic acid and the internal use of quinine and iron, the patient rapidly rallied. A new difficulty now supervened; the anterior flap had sloughed so much that it could not be drawn over the end of the bone, which, in the patient's condition, the doctor was afraid to remove. Not being able to bring the edges of the flaps together with plaster in the usual way, and not even partially without giving the patient extreme pain, it now occurred to Dr. Getz (as to others before) that it would be a good plan to apply strips of adhesive plaster to each flap, extending them up the limb

eight or ten inches. To these a cord and weights were applied, giving the patient no pain and covering the bone more nearly than could be done before. Under this plan of treatment the bone closed over entirely, and a good stump was the result. Dr. Getz believes that no other plan of treatment would give such favorable results. He believes that the treatment of flaps in amputations of the extremities (when union does not take place by what is called first intention) should invariably consist of adhesive strips and weights, instead of applying the strips as has been formerly done. The advantages are as follows: (1) Everything is gained by strips and weights that can be accomplished in the old way. (2) Free vent is given to the pus. (3) The vitality of the flap is not interfered with by compression. (4) It is much less painful to the patient. (5) The ends of the bones can be made to heal over, which could be done in no other way.—*Med. and Surg. Reporter.*

Treatment of Epilepsy. By A. Hughes Bennet, M. D.—To tabulate the results of treatment in a limited number of cases of epilepsy, presents the greatest possible difficulty. The disease is so chronic, and the treatment so prolonged, that the physician rarely observes the termination of the case. If the medicine does not soon procure relief, patients seek advice elsewhere; if the symptoms abate for awhile, they think themselves cured, and equally fail to return. The following statements therefore are confined to the consideration of the temporary modification of the epileptic paroxysms, either in frequency or severity, and to the various general phenomena which follow treatment by the bromide of potassium or ammonium. The dose of these salts varies according to the strength, age and general state of the patient. For an average adult, thirty grains, three times a day, is the usual dose. The following is a convenient and efficacious prescription: ℞. Potass. bromid. grs. xx; ammon. bromid. grs. x; spiritus ammon. arom. ℥ss; aqua ℥i. Fiat haustus ter in die sumendus. The first dose was taken before getting out of bed in the morning; the second in the middle of the day on an empty

stomach, and the third the last thing at night. If in the course of a fortnight the attacks continued, the dose was increased week by week till there was some obvious modification in their severity or frequency, and this has been, if required, gradually increased to from sixty to ninety grains three times a day. In the event of the first or any subsequent dose proving efficacious in warding off the seizures, it was continued for about a couple of months, that is, assuming no really dangerous signs of poisoning presented themselves. The fact of the bromide rash or moderate constitutional weakness being developed was found of no great inportance, if the attacks were in abeyance. At the end of from two to three months, according to circumstances, the dose was gradually diminished, till the smallest possible amount necessary to materially modify the paroxysms was found; and this, when ascertained—the health remaining good—continued for many months. Of one hundred cases treated in this way, it may be stated that, with one or two exceptions, the bromides have had the effect of materially modifying the frequency and severity of the epileptic seizures; moreover, they diminish the severity of those which do occur. The bromides, also, improve the general health, and greatly relieve those persons who had previously suffered from headache, nervousness and other ailments. If the bromides are discontinued after arresting the seizures for many months, the attacks at once return, showing that the action of the medicine is not permanent. In only one-third of the cases did symptoms of bromism appear, and these rapidly disappeared on discontinuing the drug for a time. Dr. Bennet, therefore, concludes that the bromide of potassium is a valuable agent in suppressing the most dangerous symptoms of one of the most terrible maladies to which human flesh is heir, and has hopes that further experience may enable us to effect a complete cure of the disease itself.—*British Medical Journal.*

The white of an egg will destroy the bitter taste of quinine and render it palatable and acceptable to delicate stomachs.—*Med. Brief.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I. *Hepatic Abscess Successflluy Treated by the Aspirator.*

On August 3, 1876, at noon, I was requested to go on board a steamer to visit Mr. F——, a surgeon, who had just arrived in Shanghai after a voyage of three days.

I found him lying on his right side. His respiration was short and catching; pulse 84, full. He had a short, hacking cough, and any attempt to speak or move increased it very much, and caused intense pain in his right side below the nipple. On percussion in the right mammary line there was dullness from the level of the nipple for two and a half inches downward; below this level the front part of the right hypochondriac and the epigastric regions were resonant. The axillary line of dullness was normal. There was marked dullness from the lower angle of right scapula downward. The vesicular murmur at base of right lung was weak, and faint crepitation was heard.

As it was not deemed advisable to move the patient during the heat of the day (the thermometer being 90° F., in the shade), he was left on board until 6 P. M., when he was placed in a cot and carried on shore. At 8 P. M. he complained of severe pain in the right side, and looked in great distress. Morphia (half a grain) was injected subcutaneously, and soon afterward he fell asleep and slept till 1 A. M. At 3 A. M. the pain returned with great severity, and the morphia injection was repeated with the effect of producing quiet sleep. When he awoke he gave the following previous history: On the night of July 13, 1876, the heat being very oppressive, he went from his bedroom and lay down on a chair in the verandah, and partly threw off his very light sleeping dress and fell asleep. A few hours afterward he woke up feeling chilly, and retired to his room. On the following day he felt pains in his right side and abdomen, which continued more or less for two or three days, and prevented him from visiting his patients. A few days' rest, attention to diet and a little saline mixture seemed to relieve

him, but for some time afterward the pains in the right side and abdomen recurred occasionally, and his bowels became irregular. On July 27 he was suddenly seized with violent pain in the right side, just under the ribs. He took a cold bath in the evening which relieved him. On the following day he had a return of the pain, which was again relieved by the bath. On the 28th, 29th and 30th the pain still continued. On the 31st it extended from the right nipple to below the ribs, and behind from the lower angle of the scapula downward. During the voyage on August 1, 2 and 3 the pain was agonizing. He was unable to lie in any position with comfort; he suffered incessantly from cough, his breathing distressed him greatly and he was unable to obtain sleep.

On August 4, Dr. Edward Henderson, at my request, kindly saw the patient in consultation with me, and on examination we found that in the right mammary line dullness extended from the level of the right nipple two inches and a half downward. The axillary line of dullness was four inches and a half; the right dorsal from lower angle of scapula downward. Fine crepitation was heard over base of right lung below scapula. Pulse 92; temperature, 6 P. M., 104.2°.

5th. 10 A. M.: Pulse 84, temperature 102°. Suffers from cough. Sputa very scanty, viscid, with slight rusty tinge. During the day he was restless, took very little nourishment, and seemed to suffer from constipation. The morphia injections were continued every eight or ten hours. 9 P. M.: Pulse 80, temperature 103.2°. He was ordered ten grains of extract of rhubarb in a pill.

6th. 10 A. M.: Slept for five hours last night. Able to get up. Took a warm sponge bath. Bowels relieved. Pulse 84, temperature 103°. 6 P. M.: Pulse 80, temperature 104.4°. In great pain. Repeated morphia injection.

7th. 8 P. M.: Pulse 90, temperature 104°. During the day cough troublesome, and pain below margin of lower ribs.

8th. Breathing much easier. Area of dullness the same. Pulse 76, temperature 101°.

9th. 7:30 A. M.: Pulse 56, temperature 97.8°. General

appearance much improved. Pulse stronger. Much less pain. Can bear some pressure below margin of lower ribs. 7. P. M.: Pulse 74, temperature 100°.

10th. 9 A. M.: Rested well last night. 8 P. M.: Pain below margin of ribs returned. Pulse 90, temperature 101.6°. Morphia injection.

11th. Passed a good night. Pulse 76, temperature 98.6°. Dr. Henderson having administered chloroform, I introduced a fine aspirator needle an inch and a half below the right nipple, to a depth of three inches. As there was no indication of pus, the exploring needle was withdrawn and again introduced between the ribs three inches below the nipple, with a similar result. It was then determined to explore once more, and the needle was introduced half an inch below and two inches to the left of the right nipple, to a depth of four inches and a half. A few drops of pus flowed into the glass part of the tube. The small needle was then withdrawn, a large-sized one introduced, and twelve ounces of pus drawn off. 6 P. M.: Pulse 72. Suffering from chloroform nausea. Very little pain and no indication of shock.

12th. 4 A. M.: Pulse weak and cough troublesome. 7 A. M.: Perspiring profusely; voice weak; still has a great deal of nausea. 10 A. M.: Pulse 64, temperature 98.6°; face very pale; extremities cold; clammy perspiration over the body. To take two drachms of brandy every hour, and to have hot application to the limbs and epigastrium. 8 P. M.: Has rallied and taken nourishment freely. Pulse 72, temperature 99.6°.

13th. Suffered a good deal from cough and dyspnœa during the night; relieved by morphia injection. 7 P. M.: Pulse 66, temperature 100.4°.

14th. 9 A. M.: Slept well. Pulse 60, temperature 99°. 7 P. M.: Pulse 76, temperature 101°. Has taken nourishment very freely.

15th. 9 A. M.: Pulse 60, temperature 99°. 4 P. M.: Chloroform having been administered, a large aspirator needle was introduced in the same spot at which the pus was taken out in the previous operation, when, greatly to our surprise,

a copious stream of dark-colored blood flowed into the aspirator bottle. The needle was immediately withdrawn. 7 P. M.: Pulse 80, temperature 101.6°.

16th. 4 A. M.: Suffering from severe pain in the right lumbar region, which was relieved by morphia injection. 9 P. M.: Pulse 76, temperature 101.6°. Suffered from pain in the lumbar muscles, cough and slight dyspnœa during the afternoon.

17th. 9 A. M.: Pulse 72, temperature 100°. Complains of pain in the right shoulder. 7 P. M.: Pulse 76, temperature 101°.

21st. 9 A. M.: Pulse 70, temperature 100°. 7 P. M.: Pulse 86, temperature 102.4°.

22d. 9 A. M.: Pulse 72, temperature 99.4°. Patient looks pale and worn. He still suffers from cough, and when the morphia is discontinued the pain in right side returns. There is still dullness from the lower angle of the right scapula downward, and crepitation over the base of right lung. The axillary line of dullness extends one inch above normal level. The condition of the patient in the evening indicating the probable increase in size of the abscess, it was determined to explore again, and, chloroform having been administered, a fine aspirator needle was introduced between the seventh and eighth ribs, in a line from the center of right axilla. A few drops of pus were seen. The small needle was then withdrawn, a larger one introduced, and twenty ounces of pus drawn off. A subcutaneous injection of morphia was then given. At 9 P. M. he felt perfectly free from pain. Pulse 74.

23d, 9 A. M.: Pulse 84, weak; temperature 99°. In the evening he had improved. Cough less.

24th. Stronger. Temperature 98.4°. Dullness below right scapula less, and crepitation very slight. Cough troublesome.

27th. Not so well. Cough and dyspnœa troublesome. Complains of pain above right nipple. On examination there is marked dullness on percussion over an area the size of the palm of the hand immediately above right nipple, and a friction murmur audible over that space. Pulse 84, tem-

perature 101°. Has suffered from cough during the day almost incessantly. 5 P. M.: Chloroform having been administered, a large aspirator needle was introduced between the seventh and eighth ribs below right axilla, and ten ounces of pus, mixed with dark-looking serum and flakes of lymph, drawn off. He felt greatly relieved.

28th. 9 A. M.: Slept well. Says he feels stronger. Cough much less. 7 P. M.: Pulse 84, temperature 100°.

29th. There is still dullness on percussion two inches above right nipple, and crepitation with inspiration and expiration; below scapula dullness very slight.

30th. 9 A. M.: Pulse 76, temperature 99.4°. Dullness above right nipple less. Marked dullness in right infra-axillary region, and moist crepitation. Patient perspiring profusely. 8 P. M.: Pulse 86, weak; temperature 101.4°. Cough troublesome.

31st. Dullness above nipple slight. Cough not so troublesome. 7 P. M.: Pulse 86, temperature 101.4°. Not so well, probably owing to severe pain in getting rid of large scybala in rectum.

September 1. 9 A. M.: Passed a restless night. Pulse 86, temperature 101°. Perspiring profusely; tongue red at tip and edges; no appetite. Ordered muriate of iron and disulphate of quinine every four hours. 7 P. M.: Pulse 72, weak; temperature 102.6°.

2d. 9 A. M.: Pulse 84, temperature 99°. Profuse perspiration during the night; pain in side increased; cough very troublesome all day. 5 P. M.: Aspirated, under chloroform, between seventh and eighth ribs, and drew off six ounces of thick, creamy-looking pus with large flakes of lymph in it. 8. P. M.: Pulse 76, temperature 99°. Expresses himself as much easier.

3d. Slept well last night. Pulse 64, temperatue 99.2°. No cough. Has felt very well all day. Taking nourishment freely.

4th. 9 A. M.: Pulse 76, temperature 99°. Feels very drowsy and languid. 11 P. M.: Called hurriedly to see him, and found him in a state of collapse: pulse thready and al-

most imperceptible; limbs cold; body covered with cold, clammy perspiration. Applied hot bottles to extremities; gave brandy, ammonia and ether.

5th. 11 A. M.: Circulation a little restored. Pulse still very weak. 7 P. M.: Pulse stronger, temperatue 99.4°.

6th. 7 P. M.: Not so well; pulse weaker; very depressed.

7th. 9 A. M.: Pulse stronger, 76; temperature 99.4°. 4:30 P. M.: Gave chloroform; aspirated between seventh and eighth ribs, and drew off four ounces of pus.

8th. 9 A. M.: Says he feels wonderfully well. Pulse 72, temperature 98.6°.

9th. 9 A. M.: Examined chest; respiration nearly normal; dullness below right scapula just perceptible.

10th. Patient is now able to sit up and walk about the room a little. Takes a liberal diet.

12th. Pulse and temperature normal; no pain in any part of the right chest; cough disappeared; secretions normal; sleeps and eats well. His only complaint is muscular aching after walking a little.

17th. Has slight pain in right side. Pulse 78, temperature normal.

18th. Gave chloroform, and introduced a fine aspirator needle at the site of the former punctures between the seventh and eighth ribs. No indication of pus or of a cavity.

20th. Has gained flesh. No pain or cough.

From this date his convalescence progressed rapidly, and he left Shanghai for England in December, 1876. When last heard of, in May, 1878, he was in good health.

Remarks.—There are several points of interest in this case. The insidious nature of the early stage of hepatic suppuration is well known. From July 13, when he experienced the chill, to the 27th of the same month, the symptoms merely indicated congestion of liver and intestinal catarrh. Suddenly, on the 27th, the pain in the right side increased in severity, and all the symptoms of hepatic suppuration began. On August 4, when he was first examined by myself and Dr. Henderson, there was no bulging in any part of the right chest, below the ribs or in the epigastrium. The right

nipple line of dullness was actually less than usual, being only two inches and a half from the nipple downward; the remainder of the right hypochondriac in front and the epigastric region were unusually resonant. The axillary line of dullness was nearly normal. Posteriorly, the dullness extended to the lower angle of the scapula, and crepitation was heard over the base of the right lung. The two latter symptoms, taken with the acute pain in the right hypochondrium, the hacking cough, and the short, hurried respiration and high temperature, all pointed to the probable existence of hepatic suppuration. On August 8 there was a very marked amelioration in all the symptoms; the breathing was much easier, and the pulse was at 9 A. M. 76, and temperature 101°; at 5 P. M. pulse 70, and temperature 100.6°. On the 9th his general condition was improved; at 7 A. M. the pulse was 56, and temperature 97.8°; at 7 P. M. the pulse was 74, and temperature 100°. On the 10th and 11th the improvement continued, and at the time of the first aspiration the pulse was 76, and the temperature 98.6°.

Notwithstanding the amelioration in all the symptoms was so very marked, it was determined to explore for pus. The first two punctures made at the first examination failed to reach the abscess, but a third fortunately penetrated into the cavity. There were seven aspirations performed at different times, and the total quantity of pus withdrawn was fifty-two ounces. The first aspiration was performed August 11, the second August 15 (but on this occasion the cavity was not entered), the third August 22, the fourth August 27, the fifth September 2, the sixth September 7, and the seventh and final one, which proved the cavity was closed, on September 17. Chloroform was administered at each operation. There was slight shock after the first operation, but none at subsequent ones. The needles were dipped in carbolic acid and oil (1 to 20) before use, and when withdrawn the seat of puncture was covered with lint soaked in carbolic acid and oil. The patient expressed himself as greatly relieved after each aspiration, and the improvement in his general condition was very wonderful. After a few days, when the more acute

symptoms returned, he frequently begged me to use the aspirator again. Great benefit was obtained from the use of subcutaneous injections of morphia, which were given two or three times in the twenty-four hours during the most acute stage of illness.

I would earnestly impress the importance of aspiration in all cases of suspected hepatic abscess. The operation is simple and free from danger. It has been my lot to witness many fatal cases of hepatic abscess, some of which, I can not help feeling, might have been saved by a timely use of the aspirator. Another important point is this: Whenever you suspect hepatic abscess operate early—at once, if you would save your patient. Do not wait for external indications or more marked symptoms. I have of late seen several cases operated on by aspiration when the patients were much reduced from hectic and diarrhœa, and not one recovered.—*James Johnston, M. D., in London Lancet.*

ART. II. *On Organic Disease of the Heart, Complicated with Bright's Disease.**

GENTLEMEN: Of this case I have a very slight knowledge; but what little I do know of it is sufficient to induce me to believe that it will be of interest to investigate it further in the presence of the class. The patient, whose name is Jane M., is thirty-two years of age, single, and a seamstress by occupation. She was admitted to the hospital five days ago. Her mother died of some cardiac trouble at the age of forty-five, and she also lost a brother from a similar affection; while a sister is at the present time suffering from an attack of acute articular rheumatism. It was when she was twelve years old that she herself was first affected with the latter disease, and, from the account which she gives of this illness, it seems altogether probable that there was the complication of pericarditis present. Since then she has had two other attacks of rheumatism; the first occurring when she was eighteen years of age, and the second when she was twenty-

*A Clinical Lecture delivered at Bellevue Hospital, New York.

one. About two years ago she was troubled for the first time with hæmoptysis, and six months ago she had a recurrence of this difficulty. Lately, she has had a third attack of it, and it was on account of this that she sought admission to the hospital.

When she first came here she was in considerable alarm on account of the hæmorrhage, and she was suffering from very marked palpitation of the heart. From the fact that there is such a history as the above, we very naturally direct our attention first to the condition of that organ; and on making an examination of it, we find that the apex is carried down to an abnormal extent, although not much to the left, and that there are two distinct heart murmurs, one at the base and the other at the apex. The first of these is direct and systolic, and constitutes what is known as a direct aortic murmur, its greatest intensity being found in the second intercostal space on the right side near the sternum. The second is one of the kind which is called indifferently a mitral direct, a mitral presystolic, or a mitral obstructive murmur, and is heard with the greatest intensity at the apex. Connected with this there is also a sensation of thrill.

From the notes I learn that there is in addition a slight phthisical affection in this case; but for this we shall have to take the house-physician's word, as I have not time at present to make a careful examination of the whole chest. Furthermore, there is distinct renal trouble present, since the urine was found to contain albumen and tube-casts; although, so far as can be ascertained, there has never as yet been any œdema.

But to return to a consideration of the heart. The heredity is a point of great interest here, and you will understand, I trust, that the reason why various members of this patient's family have been troubled with cardiac disease is because acute articular rheumatism has been hereditary with them. Let us now examine the physical signs a little more minutely; and I need hardly impress upon you that the utmost familiarity with the various signs met with in health and disease, both in the lungs and heart, is indispensable if you wish to

make any practical use of the knowledge which you acquire here. In the first place we decide that there is enlargement of the heart, because (1) the apex is in the sixth intercostal space (although, as we have seen, it is not moved outward much), and (2) because the superficial area of cardiac dullness is increased. The amount of the enlargement is moderate here. The apex beat is of good strength, but it is not abnormally marked. On listening carefully with the stethoscope to the apex murmur, we find that it is rough in character, and that it occurs after the second sound and is suddenly arrested by the first sound of the heart. As there is no aortic regurgitation in connection with it, a mitral obstruction is thus indicated, and this is here of the kind which is commonly met with, giving rise to the "button-hole" aperture. The basic murmur, on the other hand, is found to be soft and blowing in character, and to be conducted upward into the carotid arteries. It is, as has been said, systolic, and therefore aacompanies and follows the first sound of the heart. Now, will the condition giving rise to these murmurs cause much trouble? No; only a certain amount of inconvenience. One of the points of most importance about such a case as this is to ascertain whether there is any immediate danger; and here we can safely say there is not. This judgment is not based at all upon the murmurs present; and, as a rule, it may be stated that the louder a murmur is, the less serious is the lesion occasioning it apt to be. The great thing to ascertain is, What is the condition of the heart as a muscular structure? and as long as it is acting regularly and well we need feel no fear for the patient. The effects of valvular lesions are indirect, and we see in them compensatory provisions of nature. It is when the heart's muscular power becomes enfeebled that the danger begins. The proper criteria by which to judge of the actual condition of the patient, and to form an opinion in regard to the future in any given case, are, not the murmurs that may be present, but the character of the impulse and heart sounds. So long as these remain right, it makes no difference whether the patient has one murmur or four.

If it is really true that phthisis exists in this case, as diagnosticated by the house-physician, it forms an exception to the general rule; for, ordinarily, we do not find this where there is cardiac disease. Still, we must not forget that in actual practice, both private and hospital, it is much more frequent to meet with two or more distinct affections in the same individual than the student would be apt to imagine from his reading. Thus, in the present instance there can be no doubt that there is at least a renal complication, and it is not unlikely that this may render the prognosis considerably more grave than it would otherwise be.

In the treatment of valvular disease of the heart, we pay no attention whatever to the murmur or murmurs that may be present, but take into consideration principally the invigoration of the general health of the patient. As long as this continues good there will only be a certain amount of inconvenience experienced at times; and over and over again have I seen individuals who were in a fair general condition tolerate the presence of valvular lesions and enlarged heart in the most admirable manner, and for long periods of time. As soon, however, as the constitutional vigor becomes impaired, the cardiac affection begins to give rise to troubles that were unknown before. From what has now been said of the present case, we should not be surprised to find that the condition of the lungs and kidney might so far interfere with the improvement in the state of the blood, as to render the prognosis quite unfavorable here; but still, notwithstanding the presence of the complications mentioned, it is quite possible that we may be able to sustain the patient's strength for a considerable time, at least, in such a manner that the cardiac disease present will give her but little trouble. Of course, further study and observation of the case are required in order that any very definite opinion to the prognosis may be formed; and in the meanwhile our aim will be to improve the general condition by means of iron and other tonics, and the most nutritious diet, of which milk should form a prominent constituent.

PLEURITIC EFFUSION IN CONNECTION WITH PHTHISIS.

The next case which I introduce will be found to be a very simple one; but I scarcely think that it is the less deserving of attention on that account. I fear that sometimes medical students, on account of the ambition of their instructors to exhibit and dilate upon the rarer forms of disease, are better prepared to diagnosticate and treat certain cases which are but very seldom encountered in practice than they are to deal with the commoner ones, which all physicians are liable to meet at any time. This patient, whose name is Bertha F., and who is twenty years of age, is suffering from simple pleurisy with effusion; but the point of most importance about the case is, that there is reason to fear that in connection with this there is present a more serious affection of the chest. In the first place, the family history is very significant. This young girl is an orphan, and she informs us that both her parents died of phthisis; her father at the age of thirty-two, and her mother at the age of twenty-four. In addition, we learn that a brother and an uncle have also died of the same disease. She has always been somewhat delicate she says, but enjoyed pretty good health up to three years ago, when she began to suffer from a short, hacking cough. In the course of a few months afterward she had some hæmatemesis. She is quite confident that she vomited the blood that came up, and says that it was not mixed with froth. In this connection, however, I should not neglect to put you on your guard against making a mistake. Sometimes when blood is expelled very rapidly from the air-tubes it has no frothy appearance whatever, and hence the physician, unless his attention has been especially directed to this point, may be misled and imagine that it has come from the stomach instead. Therefore, we must not attach too much importance in any given case to the fact that the blood is not frothy; but whenever we find that this is the case, we should not neglect to inquire if it came up very rapidly. Then again, we must remember that sometimes the blood coming from the lungs is swallowed and afterward vomited by the patient.

After a time the girl had a slight attack of pleurisy, and about eighteen months ago was obliged to give up her regular work. Six months ago she began to suffer from cold sweats, and her cough became more troublesome and accompanied by more expectoration. Since then she has continued to lose flesh and grow weaker, and she has suffered from more or less pain about the neck and arms. She entered the hospital just a month ago, and since coming in has remained about the same as regards flesh and strength, though her cough has improved and she has had considerably less pain.

It is scarcely necessary to go into the physical signs very minutely here, but I think I can readily demonstrate to you the presence of a considerable amount of pleuritic effusion. When a comparison is made between the percussion-note of the two sides of the chest over the upper part of the lung in front, you will notice that on the right side we get a vesiculo-tympanitic resonance—that is, a resonance of greater intensity than is normally found, which is to some extent vesicular and to some extent tympanitic in character, and the pitch of which is raised in proportion to the tympanitic quality present. This, you will remember, is the rule where percussion is made over the upper part of the lung in any case where there is an effusion which only partially fills the chest. Here, on the other hand, in percussion over the lower part of the right lung, there is complete flatness; and it is found, moreover, that the upper border of this flatness is a horizontal line. Finally, it can be eaily demonstrated that this line of flatness alters with the position of the patient, whether she is sitting or standing upright, or is in a reclining posture. Here, then, is abundant evidence of the presence of liquid in the pleural cavity; and, in addition, we have the characteristic changes in the voice-sounds; impaired or abolished vocal resonance, with absence of vocal fremitus, below the level of the fluid. As is apt to be the case where there is pleuritic effusion on one side of the chest, the various signs are somewhat exaggerated as regards the healthy lung on the opposite side.

Up to the present time I have not read the carefully pre-

pared history of this patient's case recorded in the hospital books; but from what we have now learned concerning it, I think there can be little doubt that she has been suffering for some time past from pulmonary phthisis, and that the present attack of pleurisy is secondary, being dependent upon the disease in the lung. In the first place we note that there has been the strongest possible hereditary predisposition to phthisis here, since both the mother and father, as well as other relatives, have died from it. Then there has been for a considerable time a cough, of a dry, hacking character, which has more recently been accompanied with expectoration, while during the last few months the well-known symptoms of hectic have supervened. The occurrence of pleurisy in such a case as this is really a point in evidence of phthisis; but we often meet with instances where the matter is not so plain, and the existence of phthisis can not be so easily made out. Under the circumstances (on account of the presence of the pleuritic effusion) it is impossible to obtain the ordinary physical signs of the disease, and we are obliged to depend a great deal upon the history, which may be by no means as straightforward as in the present instance. Where there is some doubt about the correct diagnosis, the presence of moist rales about the level of the upper border of flatness, however, will have considerable significance as probably indicating the co-existence of phthisis.

ACUTE DESQUAMATIVE NEPHRITIS.

We have next a case of different character. This little patient, whose name is Kate C., and who is thirteen years of age, was admitted to the hospital six days ago. The history states that her mother died of phthisis. She enjoyed good health up to five days before her admission, when she began to suffer from general malaise, with considerable dizziness of the head. In three days from the time that she first began to feel unwell there occurred a complete stoppage in her water, which lasted from the morning of one day until the afternoon of the following, or about thirty-six hours. At the same time she began to suffer from pain, headache and vomiting. On the day after she again began to pass urine

she was brought here, and at the time of her admission the temperature was 100°. The urine was found to be highly-colored, acid in reaction, of a specific gravity of 1032, slightly albuminous, and also containing hyaline casts. There was no œdema of the feet or other portions of the body. We judge, therefore, from these characters, that the stoppage of water above spoken of must have been due to suppression rather than retention of urine. Among other measures resorted to in the way of treatment was dry cupping, and we find now, six days after admission, that the urine is passed freely, and that it is pale in color and of a specific gravity of 1015, while it contains no casts whatever.

At present, therefore, the patient is practically well. But now let us inquire what has been the matter with her. This attack, which I learn (although this is not stated in the notes) came on after exposure to wet and cold, was in all probability one of acute desquamative nephritis, acute tubular nephritis, or acute albuminuria, as the affection is indiscriminately called. It is the form of nephritis which occurs as a sequela of scarlet fever, and which rarely results in permanent disease of the kidneys. When not following scarlet fever, it is ordinarily due to exposure, as in the present instance; and hence those given to intoxication are peculiarly liable to it. This patient presents an exception to the general rule in the fact that no œdema has been present in her case; and this is one of the points of interest about it. Frequently there is a very considerable amount of general dropsy in connection with the disorder. In cases like the present, where there is no œdema (especially in private practice), there is often no examination of the urine made whatever; and consequently the diagnosis that is given is incorrect. The symptoms, instead of being attributed to their true source, are placed to the account of "malaria," or some other trouble. I would put you on your guard, therefore, against neglecting to make an examination of the urine, even in cases where there is nothing to direct your attention especially to the kidneys.

As regards these cases of acute nephritis, there is not in-

frequently a certain amount of danger to the patient, from the accumulation of urea in the system. Only to-day I have seen a little girl suffering from acute albuminuria as the result of scarlatina, in whom there is almost complete suppression of urine. In the twenty-four hours previous to my visit she had passed only two ounces of water, and even this was a somewhat larger quantity than she had passed in the preceding twenty-four hours. The symptoms are still comparatively insignificant, so that one would hardly suppose that there was much cause for alarm; and yet the child is in imminent danger, for unless the kidneys resume their secretory functions more perfectly we shall have uræmic poisoning and death resulting. In all such cases the two points of vital importance in connection with the proper elimination of urea from the system are the quantity and the specific gravity of the urine; and I should like to impress this as strongly upon your minds as is in my power. I may also remark here that the attack of scarlatina preceding the albuminuria (as is frequently the case) was a very mild one, and that in that case, as in the one now before you, there has been no accompanying œdema.—*Prof. Austin Flint, Sr., in Phila. Med. Times.*

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

ART I. *An Essay on Medical Societies and the Medical Profession in General.** By D. WHITE, M. D., Denison, Texas.

As most essays and addresses to medical societies are written upon some very scientific subject, and consist chiefly of what some renowned professors, and sirs, and Messrs., of foreign countries, say, or have said or written; and as most of us have read it—or if we have not, we can procure a medical journal and read for ourselves—I can see no use in rehashing it again and again; and if we are compelled to quote authors, why not quote our own great and renowned Gross,

* Read before the Grayson County Medical Society, September 6, 1879.

Pancoast, Dunglison, Meigs, Sims, Sayre and dozens of others that I could mention, whom I consider not at all inferior to any foreign professor, sir or Mr. I think when an American addresses an audience or reads an essay to one, and is continually quoting from foreigners, he is not only trying to make the audience think that these foreign gentlemen are superior to our American gentlemen, but that he himself is more conversant with the views of different celebrities of the world than with his brother chips.

Now, I propose to deviate a little from this well-beaten path, and pay my respects to the much neglected subject of medical societies and the medical profession in general, and I am only sorry that I do not feel equal to the task imposed upon me.

In the first place, the medical profession is largely made up of mercenary men, who think that nothing more is needed than a diploma, and the money comes rolling in. Finding that this is not the case, and having spent most, if not all, of their loose cash, they are forced to the necessity of pandering to the public. For instance, Smith comes along and hangs out his shingle; he has attended one course of lectures in some regular college, and then graduates in a homœopathic college; advertises himself as physician, surgeon, accoucheur, etc., and will practice both allopathy and homœopathy, as the people may desire.

Next comes Johnson; he has attended a course of lectures in the old school, and graduated in an eclectic college; he associates himself with Smith, and they cover the whole field of medicine and drive a staving business.

Schovendyke is the next; he comes along with a plug hat on his head and a fine cane in his hand, and parts his hair in the middle; looks around in a non-committal way and finds out which is the strongest church; and, if it is not too strongly represented, that church soon has an additional member; and so it goes on until every religious denomination, and even the different political parties, are represented; and it is in this way that the dead beats and influential political parties all over the whole country get medical attention for nothing.

Some even stoop to taking families by the year, which, I think, is the last resort. Others undercharge, while others make frequent and unnecessary visits when convenient, and reduce their bill to what would be reasonable for such services, which makes their patrons think they are very reasonable in their charges. A thousand times have I been told (when I presented my bill for two dollars per visit for four or five visits) that Dr. Smith, Johnson or Schovendyke had come eight or ten times to see Billy when he had the measles, and six or eight times to Jane when she had the whooping cough, and two or three of these visits were made when it was pitch dark, and raining, and hailing, and blowing, and his bill was only ten dollars, and in some instances even less. Now, if a young, or an unfortunate old, physician makes any complaint about these irregular charges or quacks, the gentlemen who are in full practice say, "Ah, just let them alone, just let them alone; they will soon play out;" and so they do, but the young, and unfortunate old, physician play out also in the meantime, or have the mice running through their cupboards with tears in their eyes.

Even the railroads have taken the M. D.'s in hand, and have made a scale of charges governing the value of their services for surgical operations, allowing not more than one-tenth to one-fifth of what should be charged (which scale or fee-bill I saw at our state medical association), and there was an effort made to bring the fact before the association, but it was declared out of order in a twinkling; some of the fortunate ones saying that the subsequent treatment would make up the deficiency. All this may be honorable, right and professional, but I fail to see it. No other profession allows railroads or any other corporation or individual to set a price upon its services, and why should the medical profession do it?

Here is the county jail which, I am told, averages thirty-three prisoners the year around, and a M. D., belonging to our society, has obligated himself to go there 365 times a year, and oftener if necessary, and furnish all the medicines requisite, for the paltry sum of $172.00; which gives him

47⅛ cents per diem for his services and medicines; but as drugs cost nothing, we will not count them.

Then again, there is the poor-house (situated three miles from the city) with forty inhabitants, and many of them are invalids to begin with, to be visited as often as the superintendent thinks necessary, for the enormous sum of $240.00 per year, and the doctor to furnish his medicines gratis! One would suppose these M. D.'s would have to practice both homœopathy and economy, and live on branch water, crackers, melons, persimmons and pecans, and wear boots without socks half the year and go barefooted the other half, in order to make both ends meet.

These contracts are made with the county commissioners, who are imposing a county occupation tax upon us of five dollars a year in addition to the onerous ten dollars state and five dollars city tax, making twenty dollars occupation tax that we, who live in the cities, have to pay, all in advance (while those who have more than this amount of occupation tax to pay can pay it quarterly), for the great privilege of being servants to the public; and this, too, in a county that is out of debt and has money in its treasury. We have no one to blame for this but the profession. Why should a doctor give his time and services to the people any more than the lawyer, merchant or grocer his time or goods? A physician's and lawyer's time and intellect are the same to them as time and merchandise to the merchant and grocer. Who ever heard of the two latter being abused because they would not credit a poor dying or dead man for a few yards of muslin for a shroud, or a can of fruit to soothe him in his last moments? No, instead of abusing them, they say they are right, they can not afford it, etc., etc. But on the other hand, who has not heard the medical profession traduced because some of its members have refused to go at the dead hour of night to visit some poor, unfortunate man, whom, perhaps, he has attended for years, and never received even the wrappings of a finger? This man may not be so poor after all; he can have two hundred acres of land, a fine house, horses and carriages and stock to the amount of sev-

eral thousand dollars in Texas (but not quite so much in other states), and still you can not recover one cent from him; he laughs at you and says he will settle soon, and you present your bill a second time, and he swears and curses and says you can sue if you want to, and if you get it, just let him know, etc.

While the goods of a man who starts a peanut stand, grocery, dry goods or drug store, are liable for his debts, even though they (the goods) are not worth a hundred dollars; notwithstanding all this, the legislators claim that they do no class legislation; now, if this does not smell of class legislation, I would like to know what would.

While talking with one of our councilmen the other evening about remitting the occupation tax, he said that he had mentioned it to one of the commissioners, who replied that there were many drummers and young men who would pay no tax if there was not an occupation tax, and as the county was now out of debt and had money in the treasury, by continuing the occupation tax it would not be necessary to levy an ad valorem tax; so we may infer from this that the business and professional men may expect to pay the necessary amount of taxes to run the county henceforth. If this is the case, then why not have something for our services when working for the county.

There are two other classes of M. D.'s which are very detrimental to the profession, viz., those who advertise consultation free, and the specialists who treat every disease at last, and nearly all with the same medicine; nevertheless, they each have one and the same redeeming quality, namely, they invariably not only charge but get good fees, and that, too, in advance. I think, however, they rank next lowest to the doctor who takes families by the year.

Unless something is done, and that soon, by the profession, to build it up, it will continue to be looked upon with that contempt common to all inferior professions, as it will well deserve to be. It may be said that medical societies can and will tend to correct these evils, but I fail to see any good effect they have had or may have in this direction, unless

they are more promptly and generally attended. We have had five or six meetings and but two essays; even the ex-president's annual address has not been delivered; he has not even honored us with his appearance, and I marvel how it is possible for the society to exist, much less prosper, under the frosts of such killing indifference. The failures to comply with the by-laws and constitution are always explained away by the same old and oft-repeated excuse, "urgent business." Smith had a rheumatic patient in a horizontal position, toes pointing upward, forming a right angle. Jones was on the qui vive, for Mrs. ———was in an interesting condition; and old School had not been out of his saddle for three days and nights, only long enough to prescribe for his patients. For my part, I never had so much time or took so much pleasure and interest in the meetings of the society as when I was very, very busy; then I needed some rest and knew that I was laying up something for the morrow, and could better afford to lose a day. We have fifty or seventy-five doctors in our county, and can scarcely get enough members out of them to constitute a quorum of five, notwithstanding we have a membership of about twenty-five. It was a fortunate thing that the powers of the constitution and by-laws placed the number constituting a quorum so low, for had they made it one more we would never have had a meeting at all. I can but think they have had some experience in this matter.

I will now give a few of the reasons why there is so little interest taken in medical societies by the members of the profession: Some know or think rather that they are not popular with the masses; some fear that they will be expected to live up to the code of ethics and the constitution and by-laws of the society; some that they will lose a day occasionally; while there are others who already know too much. Notwithstanding they stand aloof, the very minute they get in trouble about their fees or have a lawsuit they throw themselves squarely upon the code of ethics, and claim the protection of the by-laws and constitution. If the society is not worth becoming a member of, why should it afford any

protection to those who ignore it only in time of need? I can see no sense in half a dozen members keeping up a society for twenty-five or thirty members; and such has been the case in every one that it has been my good fortune to be connected with. If these drones in the societies are so very busy that they can't possibly give us a few hours of their valuable time and wonderful intellect (for it must be this that keeps them so busy) once a month, I think it would be well to drop them and let the active ones enjoy the glories and benefits, if any there be.

If the fops, quacks and nincompoops are not eliminated from our order, the time is in the near future when the disciples of Æsculapius will be held in as great contempt (and justly so) as are now the professionals of the "green cloth." I can contemplate with some degree of equanimity the errors and follies of a young limb of tne law while playing (through ignorance) with the substance and pecuniary vitality of his client, for the damage is reparable; but I know of no sadder and more melancholy spectacle than to witness a superficial practitioner of medicine (recommended only by the dignity of his calling) and a stranger to medical jurisprudence, absolutely toying with domestic happiness and human life.

In conclusion, if I have said anything to mar the feelings of any member of this society, I have only to say that this is about as good as any society that I have ever had the pleasure of belonging to.

ART. II. *Morbid Reflex Excitability.* By A. W. GRIGGS, M. D., West Point.*

Modern pathologists have greatly increased the area of scientific investigation. They have taken the widest scope in their researches after truth, and have enriched the science of medicine with important facts and discoveries relating to disease and its causation. The use of the microscope in histological examinations, and the employment of chemical re-

* From the Transactions of the Medical Association of Georgia, April, 1879.

agents to detect the nature of morbid products and changes in the various pathological conditions, have removed doubt and uncertainty, and established a sure basis upon which to erect more plausible and substantial theories. The department embracing the study of the diseases of the nervous system has always been most interesting to the writer, and the object of this paper is to call attention more closely to certain functional disturbances which can not be explained unless we consider the part performed through the nervous connections. If we proceed upon the idea that all the functions are performed through the agency of the nerves and their centers, and understand the great part that is played by reflex action, it will not be difficult to see that morbid impressions can be made through this medium upon organs not primarily involved. This is what we call morbid reflex excitability. If this reflex excitement be sufficiently intense and continued, the persisting perversion of function may result in structural disease. The stimulus may exist on account of disordered action in some organ, and reflected through a nerve-center produce an exaggeration of sympathy. Or, again, the centripetal and centrifugal nerve filaments may be in a preternaturally irritable state, or the center of reflection may, from some intrinsic cause, be unable to transmit otherwise physiological impressions, and thus morbid reflex excitability may originate, or reflex paralysis may occur. Perhaps in the majority of instances the phenomena are merely those of reflected irritation occasioned by derangement of function in some important organ. Hysteria—denominated the multiform disease—is nothing but morbid reflex excitability, and its varied and contradictory manifestations are due to the wide range of sympathetic connections possessed by the uterus. In health a proper balance is maintained between the different tissues and organs of the economy; but when one from any cause fails to perform its duty, others are disturbed, and the previous harmony is replaced by irregularity and confusion. Indigestion is a source of headache, pain in the chest, cardiac palpitation, perverted vision, convulsions, sleeplessness, irritability of temper, etc., etc., and

these are but the expressions of transferred irritation, or, if you please, of morbid reflex excitability. Thousands of cases are constantly being presented, which, if properly investigated, would greatly enlighten the profession on this subject. Most of the works on the practice fail to intrude upon the specialists in their different departments, and the common practitioner does not look outside for the greatly-to-be-desired information, and, therefore, fails to acquaint himself with many interesting and important truths. Specialism has done much to advance the science of medicine, and that which is devoted to the diseases of the mind and nervous system has gained great prominence for this department of pathology. It would be very pleasant to us to discuss the progress that has been made since the time of Sir Marshall Hall, in the elucidation of many obscure problems relating to neurology. But, inviting and tempting as it is, we will forego the pleasure, and content ourselves by introducing a few examples, some of which are quite common, hoping thereby to influence others to undertake the study of more difficult and complex conditions dependent upon morbid impressions transferred through the reflex system to organs or structures generally in a previous state of health.

Case of Spasm of the Glottis. In 1859 I saw a girl, white, aged ten years, suffering from what is known as spasmodic croup, with the symptoms well marked. She was considerably alarmed. The free administration of ipecacuanha caused about a pint of blackberries to be discharged from the stomach, and immediate relief was obtained. Such cases have doubtless happened in the practice of every experienced physician. I have treated many such, being dependent upon an over-crowded stomach, or on some crude ingesta producing abnormal excitability in the muscles of the glottis, through the par vagum.

Case of Convulsions from Intestinal Irritation. Most of us have seen many of these cases in children, and I will only report one from among the number that have occurred in my practice. Several years ago I was called to see a boy, white, aged six years, who was having convulsions every ten to fif-

teen minutes. Two physicians had been with him several hours, and calomel and powdered pink root had been given under the supposition that worms were the exciting cause. A large dose of castor oil and turpentine was suggested and administered, and the bowels were freely acted on in about two hours, with only an abatement of the symptoms, the convulsions now recurring from a half to three-quarters of an hour apart. They continued notwithstanding the application of sinapisms to the spine, the hot bath and the free use of anti-spasmodics until, at the expiration of thirty-six hours, we gave another dose of oil and turpentine, which acted in an hour, and discharged a small quantity of dry persimmon bark from the bowels. He had no other convulsions, but was quite exhausted and was some time in recovering from the attack. I have seen children have convulsions from imprudent eating oftener than from all other causes combined. I call to mind many examples, occasioned by eating unripe fruit, raw potatoes, popcorn, etc. It is thought that children are more subject to convulsive attacks on account of the predominance of the spinal over the cerebral system. There is, therefore, but little control exerted by the brain over the reflex apparatus of the spinal system.

Case of Convulsions from Dentition. There is a little girl in this city who regularly had convulsions during the process of dentition, whenever we failed to lance the gums as soon as they became slightly swollen. There is nothing peculiar in this any more than in the former cases, and it is only introduced because it goes to show that any physiological process, when disturbed in its course, is capable of being converted into a cause of morbid action somewhere, and frequently involves troublesome if not serious complications. The phenomena which appear during morbid dentition are the most diversified of all others except those of hysteria. Formerly nearly all the ailments of children were ascribed to the presence of worms in the alimentary canal. In fact, a child can hardly be sick now but that some one will bring in a bill of indictment against these greatly persecuted scavengers. They are doubtless sometimes at fault, but where children are properly

cared for there will be but little use for anthelmintics. In the last fourth of a century I have not treated two dozen cases of sickness which I thought to be caused by the presence of worms. They occasionally accumulate in the intestines, and produce reflex troubles and excitements, but this is mostly the case with those children who have not been properly fed. These remarks bring me to the consideration of a case which I believe to be of some interest in this connection, which will further prove that I am not an absolute infidel on the subject of entozoa, in their relations at least to functional disturbances in the human system.

Case of Epileptiform Convulsions from the Effects of Ascarides in the Rectum of a Child. Miss ———, white, aged twelve years, in 1872 had several epileptiform attacks. I was frequently summoned to see her, but she would be better on my arrival. The parents thought that these were spells of fainting. One afternoon I happened to be present when she had an attack, and was convinced that it was epileptiform. She was a well-grown girl for her age, and I thought of the physiological changes that occur at puberty, but became satisfied that these were not affecting her, as the mammæ were yet only rudimentary; and other evidences, I was also informed, were absent. Being at sea in the case, I undertook to control the symptoms by the use of the bromide of potassium. Calomel was given several times to correct the secretions, and a suitable hygienic regime was enforced. The treatment was persevered in for several months with but little to encourage its continuance. I now learned, upon inquiry, that the patient occasionally passed ascarides with the fæces. All other treatment was immediately abandoned, and full doses of aloes were ordered to be taken every two or three nights till the worms ceased to be passed. Numbers were evacuated and she was entirely relieved, and there has been no return.

There are other conditions due to morbid reflex excitability in which tetanic spasms constitute the grave symptoms. I am indebted to my friend, Dr. James B. Baird, of Atlanta, the efficient secretary of this association, for the facts in a case which occurred in his practice. A little boy was taken

with the usual symptoms of tetanus without having received wound or injury. These were violent and persistent and defied all treatment, until the prepuce was slit up, the existing adhesions broken down, and the accumulated secretions removed. The patient then made a good recovery. The cause was certainly obscure and its discovery a triumph of science.

There is quite a different condition of things in what is called reflex paralysis. Brown-Sequard, the renowned physiologist, teaches that this is dependent upon reflex anæmia of the cord, caused by reflex contraction of the blood vessels from irritation in some peripheral organ or part. Others hold that peripheral irritation can, by constant action upon a center of reflection, so overtax and exhaust it that paralysis will be the result. There are instances of sudden attacks of this kind which may be explained by the immediate shock at once overwhelming the center involved.

There are many more persons daily suffering from reflex troubles than we would imagine. How else shall we account for the great uneasiness of sensible people about trifles? Most of the cases of insanity are, in my opinion, the result of morbid reflex excitability. Of course my experience with the insane is comparatively limited, still I have, in my long experience as a physician, had some opportunity to study the diseases of the mind, and I hope to be able before long to present a paper to the profession on this subject, at least so far as relates to criminal patients.

Asthma is merely a reflex disorder, and is as amenable to treatment as any other of the kind, if the cause be removed before the disease becomes fixed in its habits.

In conclusion, permit me to say that the subject of this paper has been presented on account of its importance. It offers a new field for study to many in our ranks, for it is a fact that we have not devoted ourselves as we ought to the investigation of the disorders of the nervous system. The term morbid reflex excitability is here used in contra-distinction to normal or physiological reflex action, which preserves harmony in the performance of the diversified functions of all the tissues and organs of the economy. The subject has the

widest possible range, and if we will study it in all its bearings our love of science will be enhanced, and many apparently mysterious phenomena will clearly direct us in our diagnosis and therapeutics. Symptoms, which are but the indices or expressions of disease—so many witnesses on the stand sworn to tell "the truth, the whole truth, and nothing but the truth"—will corroborate each other's statements; all apparent contradictions will be explained away in the light of the law, and the right interpretation of the testimony will induct us into a true understanding of the nature of the case.

CHEMISTRY AND PHARMACY.

"Diruit ædificat, mutat."—Hor.

CONDUCTED BY C. W. NULL, M. D., LOUISVILLE, KY.

Homœopathy Simplified.—A writer in the *Hahnemannian Monthly* aids us by concrete examples to get a notion of homœopathic attenuations. It should be stated that he writes as a homœopath, but in opposition to the high dilutionists. He says: Suppose the crude medicinal substance to be represented by a No. 3 homœopathic pellet, the first attenuation would be represented by an acorn, the second by an orange, the third by a pumpkin, the fourth by a hogshead, the fifth by a large room, the sixth by a church, . . . the twelfth by the Mediterranean Sea; . . . the fifteenth would be eight times as big as the earth, . . . the eighteenth six times as large as the sun, . . . the twenty-fourth twenty-three times as large as the solar system; . . . the thirtieth would be as large as fifty-six spheres whose diameter should reach from the extremity of our solar system to the nearest fixed star. It would take one 56 times 230,000 years to travel around these spheres at the rate of a thousand miles per minute. One drop of liquid measuring the tenth of an inch in diameter, raised to the thirtieth dilution, would contain 2,058,510,642,141,870,000,000,000,000,000,000,000,000,000 drops.—*Boston Journal of Chemistry.*

Substitute for Linseed-Meal Poultice.—Volkhausen prepares a cataplasm by saturating a piece of thick white felt-paper with a decoction of linseed. This is to be immersed in hot water before it is applied, when it swells considerably. It must be covered with some impermeable material, and fastened securely in place, and ordinarily does not require removal before twelve hours have elapsed.—*Pharm. Zeitung.*

Blood-Coloring Matter free from Iron.—MM. Paquelin and Jolly announce that they have obtained the hæmatic pigment in a state of perfect purity and free from iron. Hæmatosine, as it is termed, burns without ash, similar to resinous substances. It is insoluble in pure water, and dissolves in small proportion in ammoniacal water, to which it gives a light yellow tinge. It is altered by potash and caustic soda solutions, to which it gives a brown color, and is lightly soluble in alcohol. The solvents of hæmatosine are ether, chloroform, benzine and bisulphide of carbon. With these bodies the weak solution is amber-colored; and when concentrated, red.—*Druggists' Circular.*

Carbolic Safety Tablets.—Calvert & Co. now prepare small tablets, not much unlike cakes of soap, containing fifty per cent. of their No. 5 carbolic acid. These make an effective antiseptic solution with forty times their weight of water, and, owing to their solid form, are free from the risk of accidental poisoning and of breakage attending liquid preparations. They deserve a high rank among the popular forms of this well-known disinfectant.—*Druggists' Circular.*

Glycerine as an Anti-Ferment.—Mr. Munk states, in the *Chemical Journal*, that glycerine retards the lactic and alcoholic fermentations. One-fifth of glycerine added to milk, at a temperature of 15° to 20° C., prevented it from turning sour for eight or ten days. One-half or one-third of glycerine, at the same temperature, postponed the fermentation of milk for six or seven weeks. At higher temperatures larger quantities are needed to produce the same results.

HINTS ON LIQUID FOOD.—Dr. A. Wood, in the *Philadelphia Medical Times*, speaking of the liquid food suitable for a case of tetanus, upon which he was lecturing, remarked: "The best diet is composed chiefly of milk and eggs, with the lean of flesh in some form. The best preparation of flesh is scraped raw meat, with milk and eggs. I can not recommend this too highly as one of the best and most nutritious articles we can use. It may be made by bruising meat in a mortar, but a better plan is as follows: Lay a slice of the round of beef upon a firm board, and scrape it laboriously with a dull case-knife until you get out of it all the red pulp it will yield. This, mixed with brandy and sugar, is not unpalatable to most persons. In using eggs it should never be forgotten that they are much more digestible raw than cooked; and that in all cases of systematic feeding they are to be given raw, diffused in milk, or partially cooked in mulled wine, or as an unbroken whole in ordinary wine.

A CHEMICAL CLOCK.—There is a clock in the Guildhall Museum, London, of which the motive power is hydrogen gas, generated by the action of diluted sulphuric acid on a ball of zinc. The clock itself resembles a large colored glass cylinder without a cover, and is about half full of sulphuric acid. Floating on the top of this acid is a glass bell, and the gas generated forces upward this concave receiver until it nearly reaches the top of the cylinder, when, by the action of a delicate lever, two valves become simultaneously opened. One of these allows the gas to escape, thereby causing the receiver to descend, and the other permits a fresh ball of zinc to fall into the acid. The same operation is repeated as long as the materials for making the gas are supplied, and this is effected without winding or manipulation of any kind. The dial-plate is fixed to the front of the cylinder, and communicates by wheels, etc., with a small glass perpendicular shaft, which rises with the receiver and sets the wheels in motion.—*Boston Journal of Chemistry.*

ADULTERATION OF TIN.—The adulteration of tin with lead, antimony or other metals, is exceedingly prejudicial to health. Tin which contains lead should be proscribed entirely by the pharmaceutical world; the lead in the block-tin worm of stills finds its way into distilled waters of every description. Cisterns lined with tin that has been adulterated with lead or contains that metal accidentally, are a source of danger to every one. Solutions, distilled waters and other liquors preserved in such cisterns soon become charged with lead, which thus finds its way into the various pharmaceutical preparations made from them.—*Boston Journal of Chemistry.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Index damnatur cum nocens absolvitus."

The Advantages and Accidents of Artificial Anæsthesia: A Manual of Anæsthetic Agents and their Employment in the Treatment of Disease. By LAURENCE TURNBULL, M. D., Ph. G., &c. Second Edition. Revised and enlarged, with twenty-seven illustrations. Philadelphia: Lindsay & Blakiston. 1879.

The work of Dr. Turnbull on anæsthesia has gone through two editions, and this would seem to show that in some manner it satisfies the wants of the profession; in what way we can not see. The introductory chapter professes to give a history of anæthesia and fails to mention the name of the discoverer. The book, indeed, seems to be merely a diatribe against this use of chloroform, which it condemns in language almost as strong as the worthless National Dispensatory of Stillè and Maisch. This preference for such a disagreeable substance as ether is easily accounted for on the part of the Boston surgeons, as they at one time pretended to believe that the discovery of anæthesia was due to them. Some of the English surgeons in the same way reject chloroform because it was introduced by a Scotchman. The surgeons of this part of the country employ chloroform almost solely, and we have very little knowledge of any accidents occurring during its use. We honor Dr. Long for his discovery of anæsthesia by means

of ether, but we do not let this admiration blind us to the superiority of chloroform.

Analysis of the Urine, with Special Reference to Diseases of the Genito-urinary Organs. By K. B. HOFMAN, Professor in the University of Gratz, and R. ULTZMAN, Docent in the University of Vienna. Translated by T. BARTON BRUNE, A. M., M. D., Resident Physician Maryland University Hospital, and H. HOLBROOK CURTIS, Ph. B. New York: D. Appleton & Co., 549 and 551 Broadway. 1879.

The translators say of this work that "they do not know of a single work in the English language where, in a concise form, so many valuable suggestions and practical hints are offered, both as regards analysis and diagnosis." The book does not pretend to be an elaborate and exhaustive treatise on the diseases of the genito-urinary organs; such an idea is at once precluded by the title and size of the work. It merely claims to contain all that is necessary for the student and practicing physician. This claim, we think, the book fully deserves, and we hope that the merits of this volume will obtain for it in America the same popularity it enjoys in Germany. The translation is well done. The book is well printed and bound, and in addition is splendidly illustrated.

A Text Book of Physiology. By J. FULTON, M. B. C. S. Eng., L. R. C. P. London, Professor of Physiology and Sanitary Science Trinity Medical College, Toronto, etc. Second Edition. Revised and enlarged, with numerous illustrations. Lindsay & Blakiston, Philadelphia. 1879.

As great progress has lately been made in the study of histology, and as Prof. Fulton believes that histology is the keystone to physiology, he has in the second edition of his work on physiology paid especial attention to the study of the tissues, and has incorporated in his book a history of that branch of science. The first chapter treats of the "proximate" principles "in a more satisfactory manner than in any other text book of physiology, and will be of great assistance to the student in acquiring a knowledge of that subject." In the

other chapters the origin, the forms and the development of the tissues are treated of and in a most satisfactory manner. Altogether, although the book is of smaller size than most text books upon the subject, and consequently concise and condensed, it is in our opinion one of the best text books on physiology yet issued, and we commend it to the profession, and especially to medical students, as probably the best text book upon the subject of physiology.

Manual of the Principles and Practice of Operative Surgery. By Stephen Smith, M. D., Surgeon to Bellevue and St. Vincent Hospitals, New York. Boston: Houghton, Osgood & Co. 1879. 12mo; pp. 689.

Dr. Smith's Manual of Operative Surgery is the second revised and greatly enlarged edition of his Handbook of Surgical Operations, issued in 1862. The present edition is intended to give an account of the general operations in surgery, the organs of special sense being excepted. There are some omissions of operative suggestions, and necessarily there are some defects in the book, but, on the whole, it is, in our opinion, decidedly the best manual upon operative surgery in any language. The author's ideal of surgical operations is that given by Malgaigne: "It should for each operation discuss indications, exactly study the surgical anatomy, review all the proceedings, and, after mature examination and judicious choice of the best, describe the manipulation with all the necessary details; point out the different methods of dressing; give a statistical account of successes and failures, and, finally, in autopsies seek the causes of death in fatal cases." Dr. Smith endeavors to follow this model, and does so as far as he is able. Some idea of the nature of the book and of the subjects treated may be obtained from the titles of the several chapters: The Principles; Lesions; Muscular; Circulatory; Nervous; Tegumentary; Digestive; Respiratory; Urinary; Generative Systems and Extremities. The work is illustrated and the text elucidated by numerous, though common, wood-cuts, and the book is issued in the elegant and substantial style usual

with the Riverside press. The style is concise and clear, the descriptions are graphic, and to medical students and young practitioners, the book will be of infinite service.

Physiology and Histology of the Cerebral Convolutions; also Poisons of the Intellect. By CHARLES RICHET, A. M., M. D., Ph. D. (Former Interne of the Hospital of Paris.) Translated by E. P. Fowler, M. D. New York: Wm. Wood & Co., 27 Great Jones St. 1879.

Great attention has been bestowed lately in England and in France upon the diseases of the brain. There have been issued in rapid succession many valuable works upon that subject, and, as a natural complement to those works, espepially Charcot's "Localization in Diseases of the Brain," the enterprising firm of Wm. Wood & Co. have just published "Richet's Physiology and Histology of the Cerebral Convolutions." It is of course necessary, in order to have an accurate knowledge of the pathology of a part, to understand thoroughly the normal anatomy and physiology of the part. In both these portions of his work Richet includes the latest researches. Fearing that his work may appear somewhat incomplete, the author solicits indulgence upon the following grounds: (1) That discoveries in cerebral physiology succeed each other with exceptional rapidity, and any work on this subject, after a few months of existence, of course fails to include an important mass of facts which each new day develops. (2) To fairly understand this department in medical science, and to be able to explain it intelligently, exacts a greater familiarity with a greater number of sciences than does almost any other subject. In order to do so, one must be a physiologist, acquainted with medical and surgical pathology, understand the science of physics, have a thorough knowledge of anatomy, be familiar with the science of zoölogy and anthropology, and thoroughly comprehend the science of psychology, which is the very essence of the subject. Furthermore, that unjust tendency which accepts recent labors too much to the exclusion or neglect of those further in the past, must be abandoned. What experiment is more in-

teresting than that of Flourens, in which the pigeon, deprived of its cerebral lobes, sits plunged into a profound sleep of everlasting unconsciousness? No one will sleep over this able work, and the translator and publisher deserve the thanks of the profession for presenting the book in so finished a manner.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

A Remarkable Case.—In January, 1864, S. F. Young, a confederate soldier, was wounded and taken prisoner. His recollections of what occurred and how he was treated for some time after he was wounded, are very imperfect. He thinks, however, that the surgeon who attended him removed some pieces of his clothing which had been driven into the wound, but could find nothing else. His case was regarded as hopeless, but, improving some, he was finally exchanged about the close of the war. He returned home. The wound never healed, but continued to suppurate, which made a constant drain on his system, until he was reduced from a stout, athletic man to a mere skeleton. Being satisfied that some foreign substance was still in the wound, he called in, at different times, several physicians. And at one time, about 1870, there was held a consultation on his case, when it was determined to operate. After one or two incisions were made, further efforts to complete the operation were abandoned, as it was thought impossible to complete it with success. In the fall of 1877, nearly fourteen years from the time he received the wound, he sent for me—about forty miles from where he lives. I found him very feeble, not able to sit up, the wound still suppurating. On examination I found that the missile had struck him, evidently, while he was lying down, as about one inch of the two lower ribs on his right side were cut smoothly away, leaving a space in which I could lay one finger between the ends from which the pieces were taken. As the suppuration was from the pelvic region, I knew that whatever of foreign matter there was must be somewhere in the pelvis. Starting my

probe in at the point from which the pus exuded—just above the middle of the crest of the ilium—I could probe about three inches down on the internal surface of that bone. He refused to take any kind of anæsthetic, hence the operation had to be performed with him fully awake. I made an incision along the inner edge of the crest of the ilium, about three inches in length, and searching down I found the two pieces of missing ribs, apparently just as they had been driven there, nearly fourteen years before. I removed them and could probe no further. Hoping that these were the only sources of distress, I closed the wound in the usual way, leaving an opening for the escape of pus. Finding from the soreness and fluctuation low down, that pus had burrowed much lower than that place from which I had removed the bones, I attempted to make an examination per rectum, but it caused him so much pain that I had to desist. I told him that I feared another operation would be necessary, as he was so very tender about the rectum; but that I would place him on quinine and iron for a time, with good, nourishing diet, with the hope that he would gain some strength. He gained but little, owing to great and continual drain on his system from the constant flow of pus, which, he assured me, had not been less than a gill every day from the time it first began. I then thought it best to operate from below. So I made an incision two and one-half inches long, just to the inner side of the tuberosity of the ischium, and pus was very freely discharged. I explored the cavity with my finger, but could reach no foreign substance. I now determined to wash out the cavity from the opening above, which had not entirely closed up. I entered the tube of a Davidson syringe in the unhealed part of the first opening, using blood-warm water. I first made gentle pressure on the bulb, but the water failed to pass out at the lower incision. Then I increased the pressure and I discovered that something gave way, and the water poured out at the opening below. I then used carbolized water and washed out the whole cavity again, when the ball—for it proved to be a Minnie-ball—descended and was shortly removed. The wound now healed

kindly, and the man is restored to perfect heatlh. In this case there are several things remarkable and of great interest. (1) That a Minnie-ball should cut the ribs off as smoothly, apparently, as if done with a saw. (2) That these pieces of ribs should be driven down some six inches along the side of the peritoneum, without breaking through into the cavity. (3) That they should remain, for nearly fourteen years, in that position without dissolving, working out or entering the pelvic cavity. (4) That this same Minnie-ball could be able to pass from the eleventh rib between the arms and tuberosity of the ischium, without disturbing, materially, the nerves and blood-vessels of the pelvis. I give this case as far as it came under my observation, and leave it to the profession to explain these apparent impossibilities to their own satisfaction. I believe myself that the ball was turned by some cause before it struck Mr. Y., and that it entered hollow end before, which may explain the cutting off of the ribs and driving them down. It must have been his position, in some way, that prevented the ball and pieces of rib from entering the cavity of the pelvis. Of the other two I am not well satisfied, and will not attempt to explain the why and wherefore. Taking this case as it is, I regard it as the most interesting that I have ever seen or read of in some particulars. I have examined the surgical history of our late war, the surgical histories of the French and English wars, but can find no parallel case. Perhaps the surgeon who treated Mr. Young's case, after he was captured, could give us some light in regard to his condition and treatment in the early part of his affliction, if he is still living. Mr. Y. does not remember the surgeon's name.—*J. A. Reager, M. D., Weaverville, N. C., in N. C. Medical Journal.*

Novel Method of Estimating the Constituents of Cereals.—Messrs. Hayes, of Roxbury, and Jackson, of Boston, Mass., have discovered a way of measuring approximately the valuable constituents of grains. If a kernel of corn be split longitudinally, and immersed in an aqueous solution of sulphate of copper, the germ, or "chit," only be-

comes colored green, thereby beautifully defining the limits of the phosphates by the formation of phosphate of copper. If a kernel of corn be split open and thrown into a solution of sulph-hydrate of ammonia, the "chit" will soon be changed to a dark olive color, which is due to a change of the salts of iron in the seed to a sulphuret of that metal; a dark-colored matter forming with the ammonia turns the vegetable coloring matter yellow, and the two colors combined produce an olive. Again, by taking split specimens of corn or other grains, and soaking them in a tincture of iodine, the limits of the starch and dextrine will be distinctly defined—the iodine striking an intense blue with the starch, and a deep port wine red with the dextrine; so that, from this test, a rich violet (being a combination of the blue and red colors) will indicate the presence of both the starch and the dextrine in the grain. If the oil be extracted from the transparent, horny part of the corn by means of alcohol or ether, the tincture of iodine will show the presence of starch in that part of the grain associated with the gluten. By these means we may easily cause any of our cereal grains to represent to us the extent and precise limits of its phosphates, iron, dextrine, starch and oil; and thus, by the eye alone, we may form an approximate estimate of the relative proportions of these ingredients.—*American Miller.*

Duboisin, the New Mydriatic.—For many years past a great necessity has been felt, not only by the limited community of opthalmologists, but also by the profession in general, for a mydriatic that should, while it embraced all the advantages and merits of belladonna, yet at the same time be free from the annoying and irritating effects that the instillation of atrophia produces in occasional cases. Many endeavors and experiments have therefore been made to find such a therapeutic agent, and the necessity for some drug that would paralyze the accommodation to the maximum, and at the same time be less lasting in its effects, thus saving the patient from many days of the greatest inconvenience, has urged on the investigations to a great extent, both in this country and

on the Continent. Any one that has been in the habit of treating diseases of the eye must remember case upon case where atropia, usually the sheet anchor of such lesions, was obstinately rejected by the patient, and where its use produced only an increased amount of irritation, in place of the soothing effects that former experience had led him to expect, and the fact that in some cases the drug refuses to act until the increased tension has been relieved by the use of leeches, or the eye itself has been left to rest free from its influences, is too well known even to render a reference to it necessary. Again, many practitioners will remember cases of iritis that were doing well and progressing favorably, the treatment of which was brought to a sudden halt by the unwelcome appearance of incipient atropia poisoning, just at the time that, from anatomical reasons, it was most necessary to maintain a free dilation of the pupil, in order to preserve the eye from the subsequent changes of posterior synechiæ. Much has already been done to guard against the evils of this otherwise indispensable remedy. Liebreich has invented a small instrument which, attached to the lower punctum, produces a temporary ectropium of the inferior lid, thus preventing the absorption of the drug through the tear passages, and Von Græfe recommends that the eye should be closed directly after the application and subsequently washed on reopening. He also advises that when strong collyria of atropia are used with great frequency, that a subcutaneous injection of morphia should be given at night to prevent all risks of poisoning. Undoubtedly, however, the most practical help that has been placed in the hands of the profession, particularly in those persons whose eyes show so extraordinary an antipathy to the action of atropia that the use of even the weakest solution is followed by extreme irritation, attended with erysipelatous symptoms, is the suggestion of Dr. W. W. Seely, of Cincinnati, published in 1866, that the solution of atropia should be combined with a mild astringent, the efficacy of which no one familiar with opthalmic surgery can question. Notwithstanding this, however, the want of some efficient drug has been strongly felt, and early in the spring of the past year M. Pitit,

of Paris, after a series of experiments, succeeded in isolating the alkaloid of a small tree of about thirty feet in height, the Dubosia Myoporides, a member of the Solanaceæ family, growing in Australia, and presented its peculiarities to the profession shortly after, on March 23, 1878. Dubosin, the alkaloid thus obtained, is of a yellowish color, soluble in water only in proportion of 1-120, but dissolving readily in alcohol, chloroform, ether-benzole and the bisulphide of carbon. The sulphate and bromide are, however, the only crystallizable salts. Soon after this Dr. Galezowski read a paper before the Society of Biology, which was published in the *Clinic*, and in the May number of the *Klinische Monatsblatter fur Augenheilkunde* de Wecker states that dubosia can be substituted for atropia in all cases that present an intolerance for the latter, and later, in his Theraputique Oculaire, he says: "What can be affirmed at present is that eyes strongly irritated by the least instillation of atropine tolerate perfectly solutions of equal strength of the neutral sulphate of dubosia." Dr. Seely, of Cincinnati, published an article in the *Lancet and Clinic* of January 11, and to him I am largely indebted for my experiments and for much of the literature that has been published in regard to it. He also quotes a case where it acted favorably in the place of atropia, and seems to sustain both Galezowski and Wecker. I began to use it early in last January, and have prescribed it freely in all cases that usually call for atropia; I find that in sixteen cases of iritis it has acted promptly well, in solutions of four grains to the ounce (this was reduced to two as soon as the pupil was fully dilated), and that it has not in a single case been followed by symptoms of either irritation or poisoning; that in regard to its power in breaking down adhesions, that it seemed to me to be superior to atropia, and that in action it was much more rapid. Its effects, too, on the accommodation are much less lasting, and the patient recovers from the paralysis in a comparatively short space of time, thus making it a most useful agent for all ophthalmoscopic purposes. In cases of keratitis, however, it seems to lack the marked local anæsthetic properties of belladonna, and for that reason is, I think, in-

ferior to it in all cases that will stand a long continuance of its use. In the case of a delicate child that has been under my care for three successive springs, it acted promptly and without any of the irritation that atropia has always produced after the first week, but here again it failed to subdue the pain, and the two remedies were alternated, the dilatation of the pupil being maintained by dubosia whenever the atropia began to irritate, and the latter being renewed as soon as the eye would tolerate it. Time and experiment alone will show what its full capacities are; but I think that enough has already been done to prove that in its rapid action, its less lasting effects and its freedom from irritating properties, it is the superior of atropia, and its power of breaking down adhesions is, at least, equal. As a local anæsthetic it is not so powerful, but for the determination of its antigmatism, and for all other ophthalmoscopic purposes, it far surpasses it from the less lasting inconvenience arising from its use. The greatest objection, perhaps, to its general adoption is its cost; but it is already kept by many of the New York druggists, and by Mr. Simms, of this city, and as the demand increases superior facilities for its production will follow, so that there is really no reason why it should after a short time be more expensive than atropia. I have always used solutions of this neutral sulphate, varying in strength from one-half to eight grains to the ounce.—*F. B. Loring, in Nat. Med. Review.*

Danger in the Use of Podophyllin.—A correspondent of the *British Medical Journal* describes four cases of injury resulting from podophyllin, the dose taken being named in only one case, when one-fourth of a grain, taken night and morning, three times, caused colicky pains and tenesmus for two days. "It would be well to remember," adds the writer, "that when patients are bothered with their bowels it is not the purgative effects of a medicine that are generally required, but the alterative; so that a half, or may be a quarter, of a grain of calomel, or one-sixth of a grain of podophyllin, night and morning, will frequently—indeed, almost invariably—produce more beneficial and lasting results than

the larger doses." In a subsequent number of the same journal, Dr. Horace Dobell says: "All who have been accustomed to prescribe podophyllin in pills will agree as to the impossibility of preventing occasional disastrous effects. But this is the fault of the form of administration, not of the drug. From a very long and extensive experience I can confidently say that no such accidents or inconveniences ever arise from podophyllin prescribed in the following form; on the contrary, it is one of the most satisfactory and reliable of our medicines: ℞. Podophylli, gr. ij; essentiæ zingiberis, ʒ ij; spiritus vini rect., ad ℥ ij. Fiant guttæ. A teaspoonful to be taken in a wineglassful of water at bedtime every night, or every second, third or fourth night, as required. Numbers of medical men, to whom I have given this prescription within the last few years, tell me that they use it in their daily practice with the happiest results."—*Boston Journal of Chemistry.*

Carbolic Acid as a Remedy against Bee Stings.—Dr. Klamann publishes in the *Allg. Med. Central-Zeitung*, a case of bee sting, followed by acute symptoms of poisoning, which was relieved within a very short time by a subcutaneous injection of carbolic acid. The patient—a robust, strongly-built young woman—was stung in the lower lip by a bee. Soon afterward she vomited; her face became flushed; the right half of the face began to swell, and the swelling soon spread over the whole face. The woman fainted, and was laid on her bed. When Dr. Klamann saw her soon afterward, he found her unconscious; the face was dark-red and much swollen; the sclerotics were injected, the lips cyanotic, the lids œdematous, the fingers and toes pale and cold. The patient did not answer when spoken to; the pulse was 72, hardly perceptible; respirations 24. Nothing abnormal could be detected in the heart, but the impulse was weak. The extremities were immovable. Cold compresses were immediately applied to her head, and five milligrammes of carbolic acid in solution were injected under the skin, near the spot where she had been stung. At the same time sal

volatile was held to her nose. In about a quarter of an hour the swelling at the lips and eyelids began to abate visibly; consciousness returned gradually, and the mouth could be opened. The tongue was somewhat swollen, but the patient could swallow without much difficulty. In the course of three-quarters of an hour the patient had three attacks of convulsive trembling of the whole body, together with violent twitchings of the muscles of the face. During each of these attacks the patient was very restless; her face became flushed, and she threw her head about. After each attack her face became suddenly pale, the skin of her whole body grew cool, and the pulse could hardly be felt. Gradually, however, the symptoms of poisoning disappeared, and the patient could open her mouth and swallow a few drops of spirits of sal volatile in water. She passed a good night, and the next day went about her work as usual. The lower lip remained slightly swollen during the next few days. A fortnight before the accident she had been stung by a bee upon the left forearm; after which the whole limb became swollen, and uticaria broke out over the whole body. The arm was still swollen when she was stung in the lip; and the injection of carbolic acid seemed to exercise a favorable influence on the arm, which, on the next day, had recovered its natural size.—*British Medical Journal.*

Paracentesis Pericardii a Justifiable Operation.—The above operation, which, after trial, has been pretty generally abandoned in New York hospitals, is urgently recommended by Dr. John B. Roberts, of Philadelphia. The operation was proposed two hundred years ago, but only seven recorded cases of the operation could be found in America. Dr. Roberts, however, collected elsewhere, in all, forty-nine cases, of which twenty-three recovered. The cases requiring paracentesis especially are those where a sudden effusion occurs in acute articular rheumatism, In Bright's disease, pleuro-pneumonia and purulent pericarditis, not so good results can be expected. The operation should be done with an aspirator; the best point for the needle or trocar being

the fifth intercostal space, one and a half inches from the middle line (not the left edge) of the sternum. If the fluid re-accumulate the tapping should be repeated, and if it become purulent a drainage-tube may be left in the wound.—*Phila. Med. Times.*

Case of Complete Removal of the Scalp from Injury.—There is a case now in Holland Ward of the Westminster Hospital, of a girl, aged fourteen, who has received a somewhat peculiar injury. Her hair was caught by the revolving shaft of a steam engine, used for working a number of sewing machines, with the result of tearing off the whole of the scalp. The accident occurred on the 12th of August, and the appearance which she presented on admission was as follows: A triangular portion of the skin of the forehead was hanging over the face, the apex of the triangle containing short hair from which long hair had evidenily been forcibly torn. Both ears, detached except below, were hanging down the neck, the right pinna being entire, but the upper half of the left pinna having disappeared. The further tear through the skin had extended backward and downward in ragged lines from the upper part of the right ear and from the middle of the left, to meet over the seventh cervical vertebra; the whole of the head and back of the neck being completely denuded of skin. One of the temporal arteries only required ligature. The scalp was sent to the hospital immediately after the patient, and was cleansed and—minus the hair—carefully reapplied by the house-surgeon, but it was dead. The hanging ears and skin of the forehead were, however, successfully restored to their proper positions. The removed parts consisted of the skin and occipito-frontalis and half the left ear, and were almost completely torn across the middle and slightly also in the longitudinal direction. The periosteum was left, but much of it subsequently sloughed. The patient has had no bad symptom and no pain. The shock of the injury was very slight, but the heart was very feeble for the first five days. There are three small circular patches of exposed bone, but most of the bone is granula-

ting well. The wound was dressed, first with carbolized oil, and, since its surface has been cleaner, with vaseline on lint. An attempt is now being made to promote cicatrization by skin-grafting.—*G. Cowell, in London Lancet.*

Galen and the Circulation.—M. Revillout, whose researches into the history of medicine in its early days are well known, lately read to the Académie de Médecine an instructive study of Galen, and especially of his views on the circulation of the blood. As an experimental anatomist, making most important discoveries by this method, and as pre-eminent among his contemporaries, M. Revillout compares Galen to Claude Bernard, although it would seem to most that the truer resemblance is to Harvey. In his "Uses of Parts," Galen showed himself a systematic theorist as well as a careful observer, and he connected his discoveries with deductions based on the conception of a preordained plan, a method into which he was led by the force of circumstances. The dissection of human bodies, probably permitted at the time of Celsus, was certainly forbidden when Galen thought and wrote, and the laws of the human body could only be inferred from those of comparative anatomy and physiology. Galen sought these laws by the dissection of a multitude of animals of different species, mammals, birds, fishes and reptiles; and Cuvier subsequently availed himself of the exact descriptions of Galen. In his physiological investigations he employed, with great success, methods which are sometimes believed to be of quite recent origin—the separation of nerves at their roots, their transverse ligature, the division of the spinal cord at different levels, the ligature of arteries, etc. He made numerous experiments to prove that the arteries contain blood and not air, as Erasistratus had maintained. He demonstrated, on living animals, that the left ventricle and pulmonary veins contain aerated blood, although after his time nomenclature stereotyped the theories which he contested. He devoted a book to this subject, and is continually returning to it in his writings; and he defied any one to prove that the pulmonary veins contain air and not blood.

He described most accurately the mode of action of the pulmonary valves, ascribing to them their function of preventing the reflux of blood, and describing their function in words which the physiology of to-day can not improve upon. He described the mixture of blood and air as occurring in the lungs, and indicated the general direction of the current of blood as being between the vena cava and right heart, between the right heart and the lungs, without possible reflux, between the pulmonary artery and the veins, and between the latter and the left side of the heart. He recognized the direction and purpose of the sigmoid valves of the aorta. The passage of the portal blood to the vena cava through the liver was universally admitted, and thus Galen had a clear idea of the direction in which the blood moves in the whole circulatory apparatus. He had even accurate conceptions of the two great anastomoses which permit the blood to pass from the right to the left sides in the fœtus. Galen insisted on these anastomoses, just as he insisted, in comparative anatomy, on the law according to which the right heart disappears in animals in which the lungs are wanting. All this is so exact that it is astonishing that so many centuries passed before the false theories were dispossessed.—*Lancet.*

Fracture of Upper and Lower Jaws: a new Mode of Treatment.—A case lately came under my notice which I think will be of interest to the surgical and dental professions. Madame S——, a performer on the trapeze, etc., in London, met with an uncommon accident, which might have been attended with more serious consequences had there not been a net beneath her into which she fell. On August 23, while going through her usual performance, part of which consisted of swinging by a wire rope, with a leather attachment between her teeth, bearing the whole weight of her body (twelve stone) on her jaws, the wire rope, coming in contact with some other part of the apparatus, became entangled and then disengaged with a sudden jerk, fracturing both upper and lower jaws; extending from canine to canine in the upper jaw, and including both canines in the lower

jaw, the whole depth of the alveolar borders being broken. The teeth and the outer plates were brought nearly at right angles to the maxillary bones. There was considerable hæmorrhage for some hours after the accident, but apparently the dental nerves and arteries were intact, as also the body of the lower jaw. She was immediately, after the accident, conveyed to the surgery of Mr. Hayes, dentist, St. Martin's Lane, where he and I adjusted the fractures; and, instead of treating the case on what is known as Thomas's principle, with wire sutures, Mr. Hayes took impressions of her mouth, and at once made vulcanite supporting frames, which kept the parts in apposition (without causing any inconvenience) by encompassing low down at the gingival border the whole of the teeth, incluing the posterior molars, and leaving apertures for the points of the teeth to protrude, except the bicuspids, which were thinly bridged over with vulcanite to keep pressure from the fractured parts. It should be mentioned that there was considerable ecchymosis into the cellular tissues of the neck and lower part of the face, evidently due to subcutaneous laceration by the violence of the jerk. The case made good progress without a bad symptom, much to the satisfaction of the patient, who was afraid she would have to lose the teeth affected by the injury. Not having seen any account of treating fractured jaws in this way, I deemed that a record of it would be of interest.—*Walter Norman, in London Lancet.*

Morphia in Asthma.—M. Henri Huchard has just published in *L' Uuion Medicale* an interesting series of investigations upon the eupnœic action of morphia, more especially in regard to the rapid cure of asthmatic attacks by the employment of hypodermic injections of this drug. M. Huchard briefly narrates four cases which he has treated, and then proceeds to quote the favorable opinions of authors who have already made trial of morphia in dyspnœa. M. Huchard believes that opium is of use in certain cases of asthma to combat the spasmodic affection, and he even ventures to regard it as one of the chief remedies. It is readily under-

stood how the bronchial spasm may be reduced by the rapid absorption of morphia, though the drug is less serviceable in bronchial catarrh, and is almost useless in emphysema. Morphia is not only a remedy in sudden attacks of asthma, with great orthopnœa and but little chronic pulmonary mischief, but it is also of use to alleviate, in a very short time, an old and organic state of the lung. Great benefit is derived from its employment in cardiac pseudasthma, in uræmic dyspnœa and in the last stage of phthisis. In every case the morphia seems to act by alleviating the cerebral anæmia and the lesions of the medulla. It plays an important part in the therapeutics of heart disease, as has already been demonstrated by M. Huchard, who sums up his previous results in the statement that morphia is to aortic diseases what digitalis is to mitral affections. The morphia must be administered subcutaneously in dyspnœa, and the injections may be given without any fear of morphinism. M. Huchard believes that morphia causes respiration, and that this eupnœic action is apart from its narcotic effect. In any case his results are readily verified in every day practice.—*Le Progres Medical.*

Signs of Death by Drownimg.—MM. Bergeron and Montano (*Annal. d' Hygiene*) have arrived at the following conclusions on the subject of death by drowning: (1) The presence of frothy foam, not only in the pharynx and the larynx, but also in the bronchi, is the constant sign of death by submersion, whether syncope or asphyxia predominated in the mode of death, and whether the individual was free in his movements, or was thrown into the water after having been made insensible by opium or chloroform, or was partly suffocated, or was fettered in his action. This absolute constancy of the presence of foam, whatever the special condition in which the submersion occurred, is, in the opinion of the authors, the single sure uniform sign proving death by drowning. (2) There is always a certain degree of congestion, and sometimes subpleural ecchymoses are seen; but these ecchymoses, which give the lungs a spotted or speckled look, are unlike the punctate ecchymoses of suffocation. (3) The intensity of the hyperæmia and the extent of the ecchymo-

ses are always in proportion to the efforts of the animal while struggling against submersion. It is the same also with the human subject, as has been verified in all necropsies made by the authors at the morgue in Paris during the last ten years. This fact permits one at a necropsy to learn concerning what passed in the last moments of life, to know whether or not the individual struggled long and vigorously during the act of drowning.—*Brit. Med. Journal.*

MEDICAL NEWS.

"Nulla dies sine linea."

Dr. A. B. Cook has resigned his professorship in the Kentucky School of Medicine.———Rokitansky, of Innsbruck, has used a 50 per cent. solution of chloral as a local application to the membrane in diphtheria, by hair-pencil, every half hour. Pain seldom severe, salivation is intense. In an hour and a half pieces of membrane came away on the brush; and at the end of two to four days the surface of wound had granulated. As the surface improved in appearance the solution was gradually diluted.—*Lancet and Clinic.* ———The cinchona is also called "Jesuits' bark," as it is said that its virtues were first discovered by a Jesuit in 1535, and that it was extensively used by the order. However that may be, the Countess of Chinchon (often incorrectly written Cinchon), who had been vice-Queen of Peru, on her return to Spain in 1632, introduced Peruvian bark into Europe, and to perpetuate the remembrance of this important service, Linnæus gave to the plant the name cinchona.—*Kings Co. Med. Soc.*———Dr. G. Dubelle says if a person swallows any poison whatever, or has fallen into convulsions from having an overloaded stomach, an instantaneous remedy, most efficient and applicable in a large number of cases, is a heaping teaspoonful of common salt, and as much ground mustard, stirred rapidly in a teacupful of water warm or cold, and swallowed instantly. It is scarcely down before it begins to come up, bringing with it the remaining contents of the stomach; and lest there be any remnant of the poison, however small, let the white of an egg or a teaspoonful of strong offee be swallowed as soon as the stomach is quiet, because

these very common articles nullify a larger amount of virulent poisons than any medicines.—*Druggists' Circular.*——— Cotoin, the active principle of coto-bark, was given in doses of one-sixth grain every two hours in seven cases of diarrhœa. The results were satisfactory, but no better than with other astringents. The small dose requisite was the only advantage in its use.—*N. Y. Med. Journal.*———The abolition of the duty on quinine has caused a stoppage of its manufacture in this country. The consequent increased demand upon the manufacturers abroad, and the fact that the duty still remains on the cinchona barks, have led to a general rise in the price of the drug in Europe, and the great fall that was expected in the price here has not yet taken place. There is consequently some dissatisfaction, which is being taken advantage of in order to produce a reaction in sentiment favorable toward the duty. It is probable, however, that a little patience and the removal of the duty on the barks will eventually secure cheap quinine.—*N. Y. Medical Journal.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The Removal of this Journal to New York City.

Dr. E. S. Gaillard, having severed his connection with the Louisville Medical College, has removed to New York City, where he will henceforward reside, and where he will also publish the Richmond and Louisville Medical Journal and the *American Medical Bi-Weekly*. This is the last number of the Journal that will be issued from Louisville; consequently, all communications, etc., for the Journal will hereafter be sent to his address in New York City—27 Clinton Place.

It is believed that this change will put the Journal and its editor in a position that will enable them to be of greater usefulness and interest to the profession generally.

Dr. D. L. Gaillard having withdrawn from the journals, communications will be addressed to Dr. E. S. Gaillard alone.